

FAMILY CHARACTERISTICS, SOCIAL CAPITAL,
AND COLLEGE ATTENDANCE

By

MARK HOLLAND SMITH

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Dedicated to my beloved wife, Terry.
Without her support and encouragement the completion
of this dissertation would not have been possible.
Her keen perception, quiet wisdom, and selfless love have
inspired me both as a scholar and as a human being.

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By

Mark Holland Smith

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Chairman: Gary Lee
Major Department: Sociology

The structural transformation of the American economy in the last two decades, by eliminating many of the high-wage manufacturing jobs once available to those with only a high school education, is increasing the importance of a college education for admittance into competition for middle-class occupations. Despite the societal ideal of universal access to higher education, as well as the demonstrable value of college attendance for subsequent occupational attainment, many people who are academically qualified nevertheless do not go to college. This study examines social factors that may account for attendance behavior.

Theoretically situated in the status attainment tradition, this study develops a model of educational attainment that focuses on the role of social interaction

variables in mediating the effects of family background variables--family income, father's education, and mother's education--on college attendance. Structural arrangements and interaction patterns fostering positive relationships are regarded as social capital, which serves as a resource for the individual as well as to constrain and enable the individual in the educational attainment process.

Logistic regression procedures are employed in analysis of data from the High School and Beyond Longitudinal Study. In order to evaluate the effects of race and sex, the social capital model of college attendance is estimated separately for whites, blacks and Hispanics, with statistically significant sex interactions.

Results of these analyses indicate that parental involvement is the most powerful predictor of college attendance in the model, more influential than family background variables. Family structural arrangements, such as single-parent household and whether the mother works, are found to exert only a modest, if any, negative impact on college attendance. While social interaction in the family has the greatest impact on attendance, the integration of the individual in the community, as measured by number of moves and by church attendance, is shown to be of some importance in the educational attainment process.

CHAPTER 1 IMPORTANCE OF COLLEGE ATTENDANCE

Introduction

The purpose of this study is to add to knowledge of the effects of social interaction on college attendance. More specifically, the aim is to ascertain whether or not supportive interpersonal interaction in the family, school, and community enhances the likelihood of attending college. Following the work of James Coleman (1988a, 1988b; Coleman and Hoffer, 1987; Coleman, Hoffer and Kilgore, 1982), such supportive interaction will be regarded conceptually as "social capital" and will be treated as mediating the impact of family background variables on college attendance.

The first chapter is designed to state the research problem in terms of the importance, both to the individual and to society, of college attendance. Descriptive statistics of changes in attendance rates are reviewed in conjunction with a discussion of the transformation of the American economy, a transformation serving to highlight the importance of college attendance in determining subsequent status attainment. Data pertaining to the effects of family background factors, race, class, and gender on college attendance rates are analyzed. This study examines the impact of patterns of student social

interaction in the family and in the community in mediating the effects of family background on college attendance.

Patterns of College Attendance

Attending, or not attending, college is one of the crucial decisions in the life of an individual. A watershed event, college attendance or nonattendance decisively shapes the subsequent lifecourse, largely determining subsequent occupational opportunities and income. The role of college attendance in mediating the distribution of occupations and incomes shows signs of increasing in importance in the status attainment process.

Educational attainment has steadily increased throughout this century, both in high school completion and in college attendance. Higher educational attainment is seen in American culture as the tried and true path of upward social mobility, an article of faith underscored by the fact that, except for the period between 1932 through 1934, college enrollments climbed even during the Depression years (Parker, 1971). As President Ronald Reagan stated in a radio message in 1983, "Education was not simply another part of American society. It was the key that opened the golden door. Parents who never finished high school scrimped and saved so that their children could go to college" (Mattera, 1990:130).

One spur to growing college attendance was federal financial work-study assistance under the National Youth

Administration (NYA) in 1935-36, for "financially-needy students with character and ability" (Parker, 1971:31). The biggest boost to college attendance increases was the return of veterans from World War II and later from the Korean War. College enrollments in the United States increased from 1,364,000 in 1939 to 8,560,000 in 1974, fueled by the post-World War II GI Bill college benefits and dramatic increases in college-age youth as the "baby-boom" generation reached college age (Thomas, Alexander, and Eckland, 1979). The most dramatic increase in college attendance came during the tumultuous 1960s, when enrollments grew from around 3,000,000 in 1960 to 7,980,000 in 1969 (Parker, 1971). Over the same period, the proportion of high school graduates enrolled in college during the year following graduation increased from 45.1 percent in 1960 to 53.3 percent in 1969, rising to 59.6 percent by 1989 (U.S. Department of Education, 1991:178).

What Parker (1971) refers to as the "enrollment explosion" of the 1960s can be attributed to the confluence of several factors. The unprecedented national prosperity and expanding middle class meant that more families than ever could afford to send their children to college. Federal and state grants, guaranteed loans and work-study programs removed financial barriers to college attendance for low-income students, while civil rights legislation made college more accessible to racial minorities and women. Additionally, open admission policies were adopted at community colleges and many

state universities, creating opportunities for college attendance for many who in earlier decades would not have qualified academically.

College Enrollment Patterns

Total degree-credit full-time enrollment grew to 10,473,000 in 1980 but remained flat through the 1980s, rising only to 10,937,000 by 1988 (U.S. Bureau of the Census, 1990:152). While total enrollment stagnated during the 1980s, enrollments relative to the size of the college-age population continued to grow, as can be seen in the fact that the proportion of the population 18-24 years of age declined by 13.9 percent between 1980 and 1990 (U.S. Statistical Abstract, 1990:16). The percentage of high school graduates enrolling in college in the October following graduation rose from 50.9 percent in 1980 to 58.4 percent in 1988 (U.S. Department of Education, 1991).

The end of the explosion in total enrollments can be attributed to demographic factors--the last of the baby boomers entering and completing college--as well as to recession and the decline of federal and state grants and scholarships for postsecondary education. The extremely rapid expansion in enrollment levels in the 1960s led to efforts to find ways to restrict admissions. Most major universities and liberal-arts colleges became more selective, stiffening entrance requirements, thus reestablishing the importance of

academic credentials (Thomas et al., 1979). The renewed emphasis on academic performance reinforced the traditional view of education as the meritocratic regulator of occupational status outcomes.

Of those students enrolled in degree credit programs in 1980, about 26 percent attended private colleges; by 1980, those attending private schools declined to 21 percent. Among black students, those attending private institutions declined 2.5 percentage points, from 22.5 percent in 1980 to 20 percent in 1980. White students attending private schools declined 5 percentage points, from 26 percent in 1980 to 21 percent in 1988. Among Hispanic college students, the percentage attending private schools declined from 21 percent in 1980 to 9 percent in 1988 (U.S. Statistical Abstract, 1990:152).

In 1988, 56 percent of those attending college were enrolled in four-year colleges and 29 percent in two-year schools, and 15 percent were attending graduate school (U.S. Statistical Abstract, 1990:152). We can observe a gradual shift during the 1980s away from more expensive private schools to public schools. Since the early 1970s, enrollment growth in public 2-year schools has exceeded enrollments in either public or private 4-year schools (U.S. Department of Education, 1991:76).

Effects of Race and Sex on College Attendance

College enrollment for men reached its peak of 63.2 percent in 1968, dipped as low as 46.9 percent in 1980, and climbed back to 57.6 percent in 1989. Enrollments for women students climbed steadily from 47.2 percent in 1967 to 61.6 percent in 1989. Attendance rates for white high school graduates rose from 53.1 percent in 1967 to 60.4 percent in 1989. Enrollment rates among black high school students fluctuated considerably while rising from 42.3 percent in 1967 to 52.8 percent in 1989 (U.S. Department of Education, 1991:103)

Table 1-1

Date of first enrollment in postsecondary education among 1982 high school graduates who enrolled before 1986, by race/ethnicity

Race/ ethnicity	Date of first enrollment in college			
	10/82	1983	1984	1985
	Percent of those enrolled before 1986			
White, non-Hispanic	81.6	10.4	4.7	3.3
Black, non-Hispanic	69.8	18.8	7.4	4.0
Hispanic	73.7	15.1	7.3	3.9

Source: U.S. Department of Education, National Center for Education Statistics, 1991.

Part of the racial differences in attendance rates for high school graduates enrolling in college by the following

fall term can be accounted for by the fact that both blacks and Hispanics are more likely to delay enrollment, as indicated in Table 1-1. Among 1982 graduating high school students enrolled before 1986, over 30 percent of blacks delayed college entry, compared to 26 percent of Hispanics and 18 percent of whites (U.S. Department of Education, 1991:20).

Nearly three out of four adult Americans still do not possess a college degree (Chronicle of Higher Education, 1989), though the percentage of all high school graduates enrolled in college or who have completed 1 or more years of college went up from 40.4 in 1960 to 57.5 in 1988. The rate of improvement was about the same for whites and blacks, with the percentage improving from 41 in 1960 to 58.6 in 1988 for whites. Black high school graduates in college or who have completed 1 or more years of college went up from 32.5 percent in 1960 to 46.6 in 1988. Women of both races improved faster than men, exceeding the rate for men by 1987. The figure for white women rose from 35.6 percent in 1969 to 59.2 percent in 1988, compared to figures of 41.7 percent and 57.9 percent for white men. Black women high school graduates in college or with 1 or more years of college went up from 31.8 percent in 1960 to 49.6 percent in 1988, compared to the figures for black men of 33.5 percent in 1960 and 42.8 percent in 1988 (U.S. Bureau of the Census, 1990:151).

As a percentage of total enrollment, white enrollment has been steadily declining, from 82.6 percent in 1976 to 78.8

percent in 1988 (see Table 1-2). The corresponding figures for blacks also declined, from 9.4 percent of total enrollment in 1976, to 8.7 percent in 1988. The difference in enrollment was made up by substantial increases for Hispanics, who increased their share of enrollments from 3.5 percent in 1976 to 5.2 percent in 1988, and Asians, who enhanced their share from 1.8 percent in 1976 to 3.8 percent in 1988 (U.S. Department of Education, 1991:80). The decline in white enrollments as a percentage of total enrollment reflects the increase of the proportion of racial minorities among college-age cohorts. The smaller decline in black enrollment is concentrated among black males (U.S. Department of Education, 1991).

Table 1-2

Percent of total enrollment, by race/ethnicity: Selected years 1976-1988

Year	White, non-Hisp.	Black, non-Hisp.	Hispanic	Asian	American Indian
1976	82.6	9.4	3.5	1.8	0.7
1980	81.4	9.2	3.9	2.4	0.7
1984	80.2	8.8	4.4	3.2	0.7
1986	79.3	8.7	4.9	3.6	0.7
1988	78.8	8.7	5.2	3.8	0.7

Source: The Condition of Education, U.S. Department of Education, National Center for Education Statistics, 1991.

Table 1-3

Percent enrolled in college in October following high school graduation, by sex, and race/ethnicity: Selected years, 1967-1989

Year	Total	<u>Sex</u>		<u>Race</u>	
		Male	Female	White	Black
1967	51.9	57.6	47.2	53.1	42.3
1970	51.8	55.2	48.5	52.2	48.3
1975	50.7	52.6	48.9	51.2	45.6
1980	49.4	46.9	51.7	49.9	42.6
1985	57.7	58.6	56.9	59.4	42.3
1989	59.6	57.6	61.6	60.4	52.8

Source: The Condition of Education, U.S. Department of Education, National Center for Education Statistics, 1991

In 1980, female college enrollment overtook that of males, and with some yearly fluctuations, exceeded male enrollment substantially by 1989, in an historic reversal of the traditional female disadvantage in college enrollments (U.S. Department of Education, 1991:103; see Table 1-3). Women also display higher rates of attainment of the bachelor degree. By February, 1986, 18.4 percent of male high school seniors in 1980 had completed bachelor's degrees, compared to 19.2 percent of females. The advantage is more pronounced for two-year degrees, with 14.1 percent of female high school seniors in 1980 completing degrees by 1986, compared to 10.8 percent of males (U.S. Statistical Abstract, 1990:164). During the 1960s and 1970s, college completion rates for women ran about 6 percentage points behind men, but by 1990 had

pulled about even (National Center for Education Statistics, 1991: 34). Probably a part of the explanation for the attainment increases for women is the fact that women consistently perform better than men, on average, in terms of high school academic performance (Thomas, et al., 1979).

Effects of Class on College Attendance

Substantial sex differences remain in college major, as well as in subsequent occupational status and income, but the statistical evidence suggests that sex plays a very diminished role in college attendance itself. By contrast, racial differences in enrollments persist. While the rate increase in black educational attainment has kept pace, roughly, with increases in white attainment over the last 30 years, the gap between average black and white attainment has not narrowed appreciably. Among students who were high school seniors in 1980, 20.8 percent of whites had completed a bachelors degree by 1986, compared to 10.1 percent of blacks, 6.8 percent of Hispanics, 29.7 percent of Asians, and 9.2 percent of American Indians (U.S. Bureau of the Census, 1990:164).

On the face of it, a plausible explanation for the persistence of the gap between white and black college attendance is that--despite civil rights laws and affirmative action programs giving preference to racial minorities in admissions and for scholarships--blacks are still subject to discrimination in college admissions. However, a more

compelling explanation presents itself when the relationship between race and college attendance is examined with controls for socioeconomic status.

Analysis of the National Longitudinal Survey (NLS) of the Class of 1972 by Thomas et al. (1979) revealed that socioeconomic class accounts for about a third of the total variance in college attendance,

in contrast to the almost negligible effects of race and sex. . . . With scholastic aptitude and family origin controlled, blacks and women experience little direct disadvantage in terms of the likelihood of attending college and far less than the disadvantage experienced by low-status students. In fact, when compared with whites of comparable status origins and scholastic aptitude, blacks actually are somewhat more likely to attend college. Nevertheless, academic credentials were the major determinants of college access for all groups. (pp. 150-51)

The lower average socioeconomic status of blacks, combined with lower measures of scholastic aptitude, accounts for much, if not all, of the difference in college attendance rates between blacks and whites. This is not to deny that blacks experience discrimination in other spheres of economic and social life, but to suggest that, with respect to access to a college education, "black aspirations are stymied not because of their race per se, but because of a lacking of [financial] ability to realize ambitions" (Thornton, 1977:40).

Undoubtedly, socioeconomic disadvantage among blacks can be traced to historic patterns of racial discrimination, though such discrimination is not apparent in college admissions. In fact, the evidence suggests a small

"affirmative action" effect of black advantage in college enrollment.

Effects of College Attendance on
Subsequent Status Attainment

Ever since Blau and Duncan's (1967) ground-breaking study of the American occupational structure, the principle has been firmly established that educational attainment is a critical factor in determining occupational status and income. Level of educational attainment exerts a powerful effect on whether or not one has a job, the character of the job, and earnings levels.

The first and most fundamental plateau of educational achievement that students must scale in order to participate in the public economy is high school graduation. In a study analyzing census and other large national data sets, Braun (1991) found that the most powerful predictor of family income is the percent who have completed a high school education. A high school education accounts for more than ten times the variance in family incomes than does race (Braun, 1991:230). The structural shift toward a service economy in the 1980s has reinforced the role of the high school diploma as the minimum criterion for economic participation. As Table 1-4 indicates, employment rates for 25- to 34-year-old men with only 9-11 years of school have declined from 87.9 percent in 1971 to 75.9 percent in 1990. Among females 25 to 34 years old with 9 to 11 years of school (see Table 1-4), the percent employed

increased from 35.2 percent in 1971 to 44.3 percent in 1990. This small increase is likely due to secular increases in female labor force participation. Completion of high school increased the percentage of women employed only to 43.1 in 1971 but to 67.5 by 1990.

In the 1950s and 1960s, a high school diploma was sufficient to obtain a high-wage blue-collar manufacturing job. As manufacturing corporations realized the comparative advantage of moving plants to developing countries, these jobs have become few and far between, helping to account for what Harrington (1984) calls the "new poverty" among young workers, especially men. Between 1978 and 1983, the percentage of poor males increased at three times the rate for females, with the sharpest rate increases of poverty among white males (Braun, 1991:155). While employment among females with high school educations rose dramatically between 1971 and 1990 (see Table 1-5), employment among males in that category declined from a high of 93.7 percent in 1972 to a low of 78.6 percent during the recession of 1983, and then rebounded somewhat to 88.6 percent in 1990. The evidence suggests that this improvement is due less to the renewed efficacy of a high school diploma in getting a good job and more to compositional changes in an economy that is generating more low-wage service sector jobs and fewer high-wage manufacturing jobs (Braun, 1991; Teixeira and Swaim, 1991).

Table 1-4

Employment rate of 25- to 34-year-old males, by years of schooling completed: Selected years, 1971-1990

Year	9-11 years of school	12 years of school	4 or more years of college
1971	87.9	93.6	92.5
1975	78.1	88.4	93.5
1980	77.7	87.0	93.4
1983	69.3	78.6	91.1
1986	73.3	86.2	93.7
1989	77.6	87.8	91.1
1990	75.9	88.6	93.1

Source: The Condition of Education, U.S. Department of Education, National Center for Education Statistics, 1991

Table 1-5

Employment rate of 25- to 34-year-old females, by years of schooling completed: Selected years, 1971-1990

Year	9-11 years of school	12 years of school	4 or more years of college
1971	35.2	43.1	56.9
1975	34.5	48.0	66.4
1980	45.6	59.5	75.5
1983	37.1	58.8	79.2
1986	44.1	63.8	80.3
1989	43.0	66.9	82.1
1990	44.3	67.5	83.2

Source: The Condition of Education, U.S. Department of Education, National Center for Education Statistics, 1991

Increasingly, the ticket to a decent job in the American economy is inscribed "college graduate." Employment rates for males with four or more years of college have consistently exceeded 92 percent since 1971, dropping below that figure

only slightly during the recession years of 1982-84 (see Tables 1-4 and 1-5). Employment rates among females with 4 or more years of college climbed sharply from 56.9 percent in 1971 to 83.2 percent in 1990. It is well to note, however, that 92 percent and 83 percent employment rates for men and women, respectively, are not as high as one might expect for college graduates.

Table 1-6

Ratio of annual earnings of male wage and salary workers 25 to 34 years old with 9-11 and 16 or more years of school to those with 12 years of school, by race/ethnicity: Selected years, 1975-1989

Year	<u>9-11 years of school</u>		<u>16 or more years of school</u>	
	White	Black	White	Black
1975	0.81	0.57	1.18	1.29
1978	0.78	0.74	1.13	1.48
1980	0.80	0.75	1.18	1.33
1983	0.75	0.65	1.34	1.50
1985	0.73	0.70	1.45	1.77
1988	0.70	0.56	1.41	1.37
1989	0.73	0.60	1.45	1.42

Source: The Condition of Education, U.S. Department of Education, National Center for Educational Statistics, 1991

There are indications that the recession of the late 1980s and early 1990s has been unusually white-collar in the composition of the unemployed (Braun, 1991), suggesting that the probability of occupational payoff for college attendance may be eroding. Examination of earnings patterns reveals even

more clearly the advantage accruing to college attendance and graduation. During the course of the 1980s (see Tables 1-6 and 1-7), the ratio of annual earnings of those wage and salary workers with 16 or more years of school to those with 12 years of school increased substantially over the ratio that was prevalent in the 1970s. In the last five years of the decade, the earnings advantage of white males was 45 percent, compared with 54 percent for black males. The earnings advantage for women for the last five years of the 1980s was even more substantial--75 percent for white females and 92 percent for black females (U.S. Department of Education, 1991:62).

Table 1-7

Ratio of annual earnings of female wage and salary workers 25 to 34 years old with 9-11 and 16 or more years of school to those with 12 years of school, by race/ethnicity: Selected years, 1975-1989

Year	<u>9-11 years of school</u>		<u>16 or more years of school</u>	
	White	Black	White	Black
1975	0.65	0.60	1.74	1.70
1978	0.55	0.48	1.58	1.38
1980	0.63	0.73	1.54	1.65
1983	0.66	0.65	1.69	1.59
1985	0.62	0.66	1.64	1.76
1988	0.53	0.62	1.78	1.93
1989	0.66	0.50	1.89	2.05

Source: The Condition of Education, U.S. Department of Education, Center for Educational Statistics, 1991

College Attendance and the "Education Crisis"

The structural transformation of the American economy over the course of the 1970s and 1980s is having the apparent cumulative effect of highlighting the effect of college attendance on subsequent status attainment. Opportunities for secure, high-wage employment are shrinking for those without college credentials. "Today a college degree is not necessarily a ticket to rapid social advancement, but without it one does not stand a chance of escaping the erosion of living standards," in the words of Mattera (1990). In 1990 on PBS' MacNeil Lehrer News Hour, financial analyst Paul Solomon described the emergence of the "upstairs economy" of well-paying business, technical, managerial and professional occupations and the "downstairs economy" of low-paying and low-skill manual labor and service occupations. The critical dividing line between the upstairs and downstairs economies is college attendance. According to the William T. Grant Foundation Commission on Work, Family and Citizenship (1988:1), some 20 million youth 16-24 years of age are not likely to attend college. Their report, "The Forgotten Half," states:

This nation may face a future divided not along lines of race or geography, but rather of education. A highly competitive technological economy can offer prosperity to those with advanced skills, while the trend for those with less education is to scramble for unsteady, part-time, low-paying jobs.

The view expressed above concentrates on the supply-side of what is widely referred to as the "education crisis." Educational attainment, as measured by the number of years in college, has increased dramatically in the last three decades. Between 1950 and 1988, the percentage of the total population completing high school increased from 35 percent to over 75 percent, with the proportion graduating from college going up from 6 percent to 20 percent (Teixeira and Swaim, 1991:24). However, the rate of increase slowed during the 1980s as several factors converged to cause concern about the educational attainment of American workers.

One of these factors generating concern about an education crisis is the demographic fact that an increasing proportion of the labor force will be composed of blacks, Hispanics, and immigrants, groups less likely to have the educational credentials needed in the labor market of the 1990s. Inner city minorities and urban and rural poor are more likely to drop out of high school. Additionally, low educational attainment contributes to problems for workers displaced by de-industrialization, as such individuals experience longer periods of unemployment and larger earning declines when rehired than do laid-off workers with higher educational attainment (Teixeira and Swaim, 1991:25).

The crux of the concern about a crisis in education lies in the idea of the "new economy." The new economy is the postindustrial economy characterized by advanced technology,

information processing, an expanding service sector, and fierce international competition. Rising occupational skill requirements, combined with flagging attainment levels, poor performance on standardized achievement tests, and unfavorable comparisons on academic performance measures with students in other countries in tests of math and science knowledge, lead to an understanding of the education crisis as a crisis in the supply of high-skill workers in the new economy.

Part of the impetus and support for the supply-side education crisis thesis came from the Workforce 2000 report (Johnston and Packer, 1987), which projected skill-level requirements for the American economy through the year 2000. The major finding of the report was that the average skill levels of the fastest-growing occupations are higher than the required skill levels of the slow-growing or declining occupational categories. Proponents of the strong version of the new economy thesis point to projected growth in high-skill occupations in the service sector such as doctors, lawyers, technicians, programmers, engineers, and paraprofessionals. The implication of the strong version of the new economy thesis is the view that a substantial, if not major, part of the problem with the performance of the economy is a failure of the supply of adequately educated workers.

More recent research, along with a more careful reading of the Workforce 2000 report, suggests that a weaker version of the new economy may be more consistent with the facts.

First of all, the projected change in the overall skill level from 1984 to 2000 is very modest, according to Global 2000 report. Secondly, the occupations that contribute the most to total employment growth are low-skill service occupations such as cooks, waiters, household workers, janitors and security guards (Teixeira and Swaim, 1991:21). Consequently, those who say America is becoming a nation of "hamburger flippers" and those who speak glowingly about the emergence of the high-skill "information workers" are both right, or partly right. The new economy is likely to be characterized by a fast-growing high-skill "upstairs economy" and an even faster-growing "downstairs economy" of low-skill, low-wage jobs.

Educational supply-side problems unquestionably do make a contribution to the dismal performance of the economy. For example, fewer Ph.D.s in science and engineering were awarded in 1985 than in 1970, and we know that a much smaller proportion of American undergraduates receive degrees in these fields than is the case for America's principal international economic competitors, the Japanese and Germans (Braun, 1991:143). A better-educated work force contributes to productivity and competitiveness.

The exclusive focus on the supply side, however, tends to obscure the arguably more severe problems with the demand side of the equation--weak labor-market demand for the middle ground of high-wage production occupations and the emergence of a radical split in the service sector distribution of

occupations into low-skill, low-wage and high-skill, high-wage occupations. Recent studies of the relationship between educational attainment and economic development in rural areas found that increased educational attainment by itself does not create jobs, and the absence of jobs results in the out-migration of the better-educated (Teixeira and Swaim, 1991; McGranahan and Ghelfi, 1991).

Declines in real wages and salaries suggest that the designation "high-wage" is a relative one. In nominal terms, wages and salaries have steadily increased, over the last several decades. When adjusting for inflation, however, real wages and salaries have declined since 1973 so that, on average, an American worker earns about the same as a worker in 1961 (Braun, 1991:159). Between 1970 and 1980, average real wages and salary levels declined in nearly every job classification among men, with the exception of teachers and doctors among professional occupations, as well as a couple of blue-collar occupational categories (Braun, 1991:161). Between 1973 and 1987, median male income declined \$2,851, in constant 1987 dollars, from \$20,603 to \$17,752, a decline of 14 percent (Braun, 1991:161).

The decline in real wages and salaries for the majority of workers is taking place against a backdrop of increasing income inequality. Much has been made of the fact that national per capita income rose 16 percent between 1982 and 1987 (Braun, 1991:158), rising 23 percent between 1977 and

1989 (Krugman, 1992:54). However, the gross average of per capita income obscures the fact that 70 percent of the total rise in income between 1977 and 1989 was concentrated among the top 1 percent of the population, 90 percent going to the top 5 percent of the population (Krugman, 1992:54). The top 1 percent of families increased their after-tax income 102 percent between 1977 and 1989, while the bottom 60 percent of families lost ground in terms of real income (U.S. News and World Report, March 23, 1992).

The growing income inequality in the United States is not due to gender discrimination or to racial discrimination, nor can it be explained by other demographic factors, but instead reflects the growing class division in American society. In an analysis of increasing income inequality, Harrison and Bluestone found:

The baby boom and the growth in the number of female workers had no significant impact whatsoever on the increase in inequality of wages. Indeed, men's and women's wages actually converged slightly in this period -- owing more to declines in the average wage of males than to increases in the wages of women. The wages of white women and women of color are now almost indistinguishable. Put another way, all of the increase in inequality since 1975 must have occurred within age, race, and sex groups, not among them. Inequality is growing among whites as well as nonwhites, among the old as well as the young, and among women as well as men (1988:120).

Under the economic conditions that are likely to prevail in the 1990s--continued loss of high-wage manufacturing jobs as industry moves to low-wage developing countries, proliferation of low-wage service-sector jobs, and declining capacity of government to provide financial assistance where

needed--a college education will be increasingly difficult to obtain for the working classes and lower middle classes without taking on huge debt loads. During a decade when real incomes remained stagnant or declined, real costs for college continued to climb. Total costs to attend public universities went up one third while costs at private colleges rose about 50 percent during the 1980s (Mattera, 1990:131).

Declining real incomes and increasing education costs coincided with declining federal governmental financial supports for higher education (as part of a larger decline in funding for a wide array of social programs over the 1980s), leading to a decrease in the proportion of student aid in the form of grants, and a steady increase in the proportion of aid coming in the form of loans (Mattera 1990:132). Student indebtedness quintupled from the mid-1970s to the mid-1980s, reaching an annual volume of \$10 billion by 1986 (Mattera, 1990:132). These large debt loads can prove to be difficult to pay off during times of recession and stagnating real income. It is not uncommon for doctoral students to graduate with debt loads, and monthly payments, equivalent to the mortgage on a house, a situation that works against the likelihood of actually being able to obtain a mortgage on a house in the near future.

A college diploma is increasingly the ticket to admittance to the pool of eligible candidates for relatively high-paying professional, technical, and management

occupations. Yet a four-year degree, or even a master's or Ph.D. does not guarantee a position commensurate with one's qualifications in the new economy.

As a personal development strategy, more training and additional educational attainment are more often than not a worthwhile investment of time, money and effort, even though the payoff is not as certain as it once was. As an economic development strategy for society, increasing educational attainment, by itself, presents a bleak prospect. Producing more graduates with 4-year and advanced degrees will benefit society as a whole only if jobs are available for those graduates.

The Effects of Social Interaction on College Attendance

Research has consistently demonstrated that, despite the public ideal of equal access to higher education, family stratification position remains the single most important social predictor of college attendance, rivaling in impact even high school academic performance (Thomas et al., 1979). Family socioeconomic status is not the only family characteristic linked to college attendance, however.

Family structural characteristics--such as the number of siblings or single parent households--have been found to have an impact on educational aspirations of high school students (Hansen and McIntyre, 1989). In addition to family structural variables, family process variables--such as parent/child

interaction -- have been shown in previous research to exert an influence on educational aspirations and college attendance plans of junior and senior high school students (Marini and Greenberger, 1978; Lomax and Gammill, 1984; Stage and Hossler, 1989). Family process variables, also referred to in the literature as social integration variables or in terms of the effects of significant others (Sewell, Haller, & Portes, 1969), are regarded as mediating the effects of family background variables on educational attainment (Thomas, 1980).

The purpose of this dissertation is to explore the mediating role of family process variables in transmitting or modifying the effects of family stratification position on college attendance, within the context of differences in family structure. This study also aims to place the individual and the family within the context of the social environment of the school and the community, with the expectation that supportive social interaction in the family, school and community is positively associated with college attendance.

This research will fill gaps in the literature or otherwise make contributions to sociological knowledge of the college attendance process in several areas: 1) the research will be the first to employ social capital theory to account for differences in college attendance; 2) The study will add to the body of research that places individuals and families in a community context; 3) The study will generate a more

complete picture of the role of family process variables in mediating the effects of family background and family structure on college attendance; and 4) methodologically, by disaggregating the SES index, the proposed research presents the potential of providing more complete understanding of the individual effects of the concepts comprising the index of socioeconomic status--parental educational attainment and family income--on college attendance or nonattendance. This study will expand knowledge of the factors that make some students "at-risk" of not attending college. It is hoped that the analysis may contribute to an expanded conception of being at risk that goes beyond stratification position and family structure to include an assessment of family process variables, as well as school and community social interaction.

In the second chapter, the development of sociological theories of educational attainment is discussed, these theories falling under the headings of the status attainment tradition, human capital analysis, and the social capital theory of James Coleman. Coleman's social capital conceptual system is explicated, critiqued, and modified to account for college attendance. The chapter concludes with a statement of the model used in the present study and a statement of the research questions to be addressed.

The third chapter discusses the methodology employed in the inquiry. That methodology calls for the use of the same secondary data set--the High School and Beyond Longitudinal

study--and similar statistical procedures utilized by Coleman in his analysis of high school dropouts. Chapter 3 includes a description of the data set, a description of the indicators of the concepts in the model, as well as an explanation of the statistical procedures to be used in the study.

Chapter 4 presents the findings of the statistical analysis and a discussion of those findings in terms of the research questions. Chapter 5 includes a summary of the findings and offers conclusions concerning the central questions of the study regarding college attendance.

CHAPTER 2 THE THEORY OF EDUCATIONAL ATTAINMENT

Introduction

On a societal level of analysis, the economic importance of college attendance, as suggested in the preceding chapter, lies in optimizing the fit of the work-force with a labor market undergoing compositional shifts, with the aim of enhancing productivity, economic development, and international competitiveness. College attendance is part of the "education pipeline" that allocates the distribution of occupations and incomes in the society. On an individual level of analysis, a college diploma is the necessary, but not always sufficient ticket, for membership in the "middle class." In the new economy, with rare exceptions, hope for achieving anything like the "American dream" -- having the kind of job that makes possible owning a detached single-family dwelling on a large fenced lot in a quiet and safe neighborhood with two cars in the garage -- lies in a college education. In a study of occupational mobility in the United States, Michael Hout (1988:1391) concludes that the answer to the old question, "how much schooling does it take to overcome the disadvantages of low social origins?", is, as a general rule, "a college degree can do it."

Given the high personal stakes, the question arises as to why the college attendance rates are not higher than they are, why some people go to college and others do not. The predominant sociological analytical framework employed by researchers seeking answers to this and other questions concerning educational attainment is the status attainment model proposed by Blau and Duncan (1967) and augmented by the "Wisconsin model" of Sewell, Haller, and Portes (1969) and dozens of variations involving literally hundreds of other studies. The status attainment model is not so much a theory of status attainment as it is a set of critical variables thought to affect educational, occupational, and income status attainment, as well as the specification of the causal relationships among the variables. The generic status attainment model emphasizes the effects of family socioeconomic status and academic ability mediated through educational performance and the influence of significant others. Another substantial body of research on educational attainment uses human capital or similar econometric approaches (Stage and Hossler, 1989). Human capital analysis, introduced by economists (Schultz, 1962; Becker, 1962), frames college attendance in terms of investments in education. A third orientation, social capital theory, integrates aspects of both status attainment and human capital analysis. Though not previously utilized in the study of college attendance, social capital theory has been used with promising results by

Coleman and associates in the study of high school dropping out (Coleman, 1988a; Coleman & Hoffer, 1987; Coleman, Hoffer, and Kilgore, 1982). The social capital approach is compatible with both human capital theory and with status attainment models, adding depth to the former and theoretical content to the latter.

Family Background in the Study of College Attendance

By general agreement, the single most powerful predictor of college attendance is the individual-level variable of high school academic performance, a fact compatible with the meritocratic ideal. The second most influential factor in affecting college attendance is the socioeconomic class status of the family, a fact much less compatible with the meritocratic ideal. Discussion of the importance of class raises awkward issues for a society steeped in the myth of the ever-expanding middle class. President Bush stated in 1988 that "[class is] for European democracies or something -- it isn't for the United States of America. We are not going to be divided by class" (Washington Post, November 13, 1988:A27). The reality, however, is that the United States has a higher degree of income inequality than any of the European democracies (Braun, 1991) and an even more lopsided distribution of wealth, in which the top one-half percent of the population owns a larger share of the total wealth than

the bottom 90 percent (Mantsios, 1992:99; see Table 2-1). As Mantsios notes:

The rewards of money...go well beyond those of consumption patterns and life style. It is not simply that the wealthy live such opulent life styles, it is that class position determines one's life chances. Life chances include such far-reaching factors as life expectancy, level of education, occupational status, exposure to industrial hazards, incidence of crime victimization, rate of incarceration, etc. In short, class position can play a critically important role in determining how long you live, whether you have a healthy life, if you fail in school, or if you succeed at work (1992:101).

Table 2-1
Distribution of Wealth in the U.S.

Families	Percent of wealth owned
The richest 10% (The top 1/2%)	71.7 (35.1)
Everyone else, or 90% of all families	28.1

Source: Mantsios, 1992: Joint Economic Committee, 1986

Socioeconomic status is linked to educational attainment in terms of conditioning the environment of support for aspirations and achievement. Children in families of lower socioeconomic status are less likely to have supports such as a private room, a computer in the home, tutoring, or residence in a district with well-funded schools. Additionally, children in families with higher socioeconomic status are more likely to be socialized in their families to value educational achievement (Wagenaar, 1987).

The social stratification position of the family, then, is regarded as the starting point and most influential social factor in models of educational and occupational attainment (Blau and Duncan, 1967; Sewell et al., 1969). Socioeconomic class status, however, does not represent a single dimension, as is the case with sex and race, but is comprised of three dimensions: income, educational level, and occupational status. In their groundbreaking study of occupational mobility, Blau and Duncan (1967) account for sons' occupational status attainment with a causal model beginning with father's education and father's occupation. As depicted in Figure 2-1, father's education and father's occupation were shown to exert substantial separate direct effects on son's education, which in turn exerts the largest direct effect on son's first job (path coefficient=.440) and main job (path coefficient .394). The family income dimension of socioeconomic status is not incorporated into the model. With occasional exceptions, most subsequent research in educational and occupational status attainment has employed composite measures of socioeconomic status that typically include fathers' and mothers' education, fathers' occupation, family income, and often also a measure of household possessions. Because these components of socioeconomic status tend to "go together," and are correlated with each other, using a composite SES measure usually does not present a problem, though it is important to remember that socioeconomic status,

or class, is not a single "thing", but instead represents a complex combination of three or more dimensions.

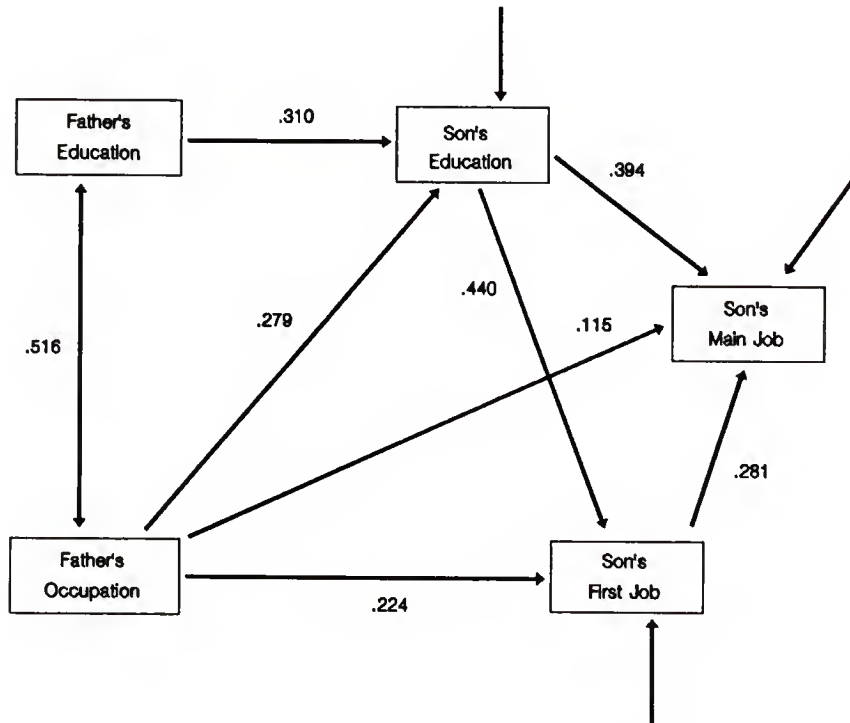


Figure 2-1

Blau and Duncan's 1967 Model of Male Occupational Attainment
Source: Blau and Duncan, 1967.

Blau and Duncan's study of occupational mobility was one of the first studies in the social sciences to use path analysis, and is notable also for inaugurating the status attainment research paradigm (see Figure 2-1). Within two years of the publishing of The American Occupational Structure, Sewell et al. (1969) introduced an expanded model of educational attainment and early occupational attainment, which, along with several similar variations (Alexander,

Eckland, and Griffin, 1975), has come to be known as the "Wisconsin model" of status attainment. The Wisconsin model incorporated measures of mental ability, academic performance, significant others' influence, educational aspirations, and occupational aspirations. Instead of looking at the separate effects of fathers' education and fathers' occupation, the Wisconsin model utilized a composite measure of SES which included fathers' education, mothers' education, fathers' occupation, and a measure of students' perceptions of family economic status.

By viewing college attendance as an important point of achievement in the "socioeconomic life-cycle" of individuals (Alexander, et al., 1975:324), status attainment research has consistently found empirical support for the causal primacy of family class status in educational, occupational, and income attainment. Since the first studies using the Wisconsin model, well over 500 subsequent papers have been published either replicating, extending or disputing the status attainment model (Campbell, 1983:47), with the result of "a body of research characterized by an unusual degree of coherence and cumulativeness" (Alexander et al., 1975:324). Some have gone so far as to argue that the status attainment tradition comes as close to a "Kuhnian paradigm" as is to be found in the social sciences (Campbell, 1983; Bielby, 1981).

In a review of the status attainment literature, Campbell (1983:47) observes that the Wisconsin model seeks answers to the following questions:

1. What are the relative impacts of family background and schooling on subsequent attainments?
2. What is the role of academic ability in the attainment process?
3. How do aspirations and motivation determine attainment, and what is the role of family and school in providing support for aspirations? Do social psychological variables merely transmit the effects of family background and/or ability or do they have an impact of their own?

The Wisconsin model (see Figure 2-2) offers a number of empirical generalizations in answer to these questions. Father's education, mothers's education, father's occupation (it is still uncommon to include mother's occupation in measures of SES), and family income each influence the status attainment process at every stage. Academic aptitude likewise influences each stage of the process, including academic performance, aspirations, interaction with significant others, as well as directly affecting educational, occupational and income attainment. Academic performance directly influences interactions with significant others, aspirations and attainment, but is itself influenced by academic ability and family background. Significant others -- peers, teachers, and parents -- exert direct effects on educational and occupational aspirations, as well as on measures of attainment. In the words of Sewell et al. (1969:83-84):

We assume 1) that certain social structural and psychological factors -- initial stratification position and mental ability -- affect both the sets of significant others' influences bearing on the youth, and the youth's own observations of his ability; 2) that the influence of significant others, and possibly his estimates of his ability, affect the youth's levels of educational and occupational aspiration; 3) that the levels of aspiration affect subsequent levels of attainment; 4) that education in turn affects levels of occupational attainment."

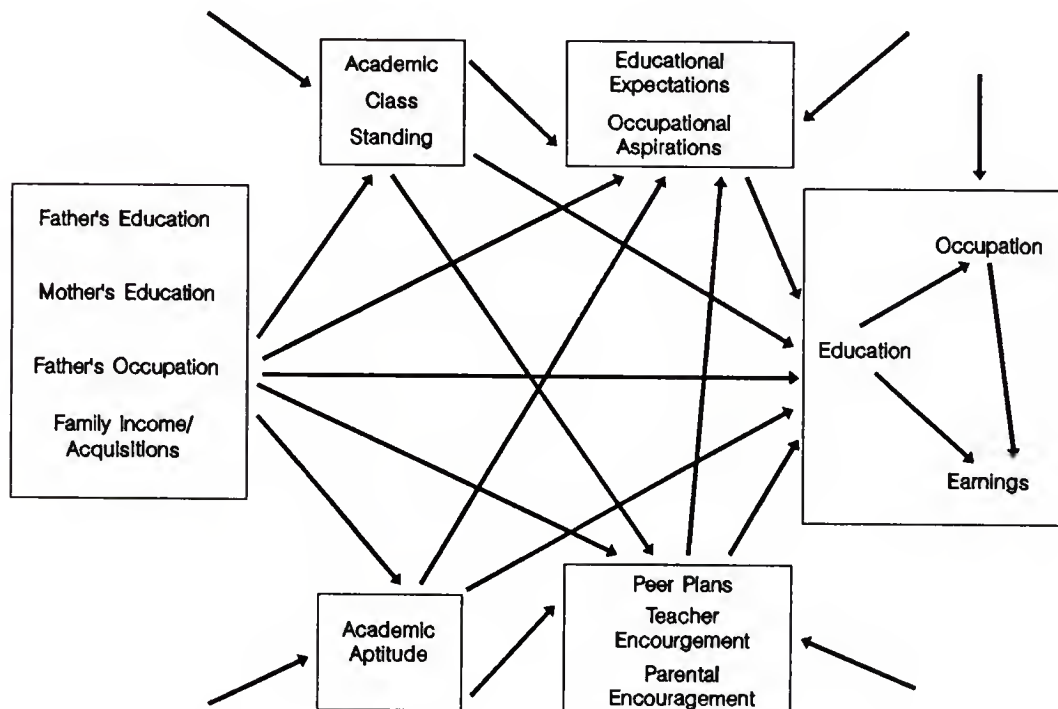


Figure 2-2
The Wisconsin Model of Status Attainment

Source: Alexander, Eckland, and Griffin, 1975.

The body of status attainment research reveals that academic performance is the single most powerful predictor of educational aspirations and educational attainment, suggesting

that a large proportion of non-attendance in college is due to low academic ability and poor school performance. Yet the research also reveals that a substantial proportion of low-SES students with the academic ability to do well in college nevertheless do not attend college. The explanation suggested by the status attainment model is that "their parents do not provide the psychological or financial support for mobility" (Campbell, 1983:59). Financial supports are determined by the family socioeconomic class status. Psychological supports are provided by the influence of the "significant other." Though friends and teachers are sometimes treated as significant others, this designation is associated predominantly with the influence of the family.

The Family as "Significant Other"

The inclusion in the status attainment model of indicators of significant others influences is consistent with research in psychology and education using social-psychological variables. As early as the 1920's, psychologists were aware of important statistical associations between family structural variables and individual abilities (Marjoribanks, 1972). Researchers determined that sibsize -- the number of children in the family -- correlates about -.3 with the mean cognitive ability scores of the children in the family.

Sibsize was taken up and incorporated with sibling spacing, birth order and parent's intellectual level to form the confluence model (Zajonc, 1976; Zajonc & Marcus, 1975) to account for variation in cognitive development. The explanation of the connection between family size and intellectual development is based on the dilution hypothesis, stated by Blake (1981:422) as "the more children, the more parental resources are divided...and hence, the lower the quality of output." The importance of family configuration to educational attainment is in the nature of the familial environment of support; whether parental attention is divided; whether older brothers or sisters are around to read to the younger children and encourage them, and so forth.

In addition to family configuration and family socioeconomic status, patterns of family interaction are linked to educational attainment and subsequent occupational attainment. Studies pointing to the importance of family interaction variables (Kent & Davis, 1957; Marjoribanks, 1972) suggest that "about half the variance in verbal ability can be accounted for by sociopsychological assessments of the family environment" (Walberg & Marjoribanks, 1976:532-534). However, Widlak & Perrucci's 1988 study has been one of the few to examine family interaction along with family configuration in seeking to understand the relationships between family environment and intellectual development. The authors found empirical support for the hypothesis that cognitive

development is positively related to parental and sibling support and encouragement.

A substantial body of research exists to suggest that interaction with parents can have a substantial effect on formation of educational goals and aspirations (Haller and Portes, 1973; Kandel and Lesser, 1969). Parental encouragement for college is positively associated with plans for college and college enrollment (Murphy, 1981).

The basic theoretical perspective views educational goals as one outcome of the socialization process and the family as a major agent of socialization. It posits a strong future orientation for parents as they view their maturing children, and assumes that the intimate interaction between parent and child is the context within which parental views of the future are transmitted to the child. Research based on this perspective has provided considerable evidence of parental influence on the child's goals (Kerckhoff and Huff 1974).

That socioeconomic class status exerts an independent direct effect on educational and occupational aspirations is a "sociological truism" (Sewell and Shah, 1968:559). Aspirations have been found to be sensitive to the influence of parental encouragement of "high educational and occupational goals" (Sewell and Shah, 1968:560), and children of higher socioeconomic status are more likely to encourage high levels of attainment. Parental support, or non-support, of high attainment is regarded in the status attainment tradition as an intervening variable transmitting and mediating the effects of family socioeconomic class background.

As noted previously, psychological research has demonstrated that number of children in the family is negatively related to cognitive development. The dilution hypothesis suggests that parental attention is diluted in larger families, thereby reducing opportunities for supportive parental interaction with children. In a similar manner, two-parent and single-parent families provide differential opportunities for parent-child interaction.

A considerable body of literature extending back several decades has examined the psychological and social effects of single-parent families on children. For example, a study conducted by Deutch and Brown (1964) concluded that, among blacks, differences of eight IQ points were attributable to father absence from the home. Examining school participation, Burchinal (1964) found that:

Lower and similar school-activity scores were observed for boys who lived with their mothers only or with mothers and stepfathers. Girls from unbroken homes were clearly more active in school activities than other girls. Girls living with their mothers only were the next most active (Bales, :148).

In a study of the effects of the home environment on the academic performance of "disadvantaged" boys, Peterson, Debord, Peterson and Livingston, (1966) hypothesized that "the nuclear family with few children (three or less) will provide the most stable environment and thus be positively associated with academic achievement (Bales, 1979 :149). Coleman (1966) developed measures of the structural "integrity" of the family, based on the presence of an intact or a "broken" home.

In the 1990s, use of this kind of terminology might be construed as implying moral criticism of single mothers and/or absent fathers. Because so many economic and social factors beyond individual control work against the maintenance of nuclear families, no such moral criticism is warranted, even though two-parent families are clearly the ideal. The important point is that the presence or absence of a two-parent household does make a difference in the structure of opportunities for parent-child interaction.

Expanding the Significant Other

Much research on effects of family environment on educational attainment has proceeded upon the reasonable assumption that the "home produces the first and perhaps most subtle influence on the mental development of the child" (Marjoribanks, 1972:324). However, the family environment is only part of the "total network of forces" acting upon the individual, a network that includes the home, the school and the community (Marjoribanks, 1972:324). According to Wagenaar (1987), attention to school and community structural variables is useful in helping to situate "individual level correlates within a larger context, thereby showing how individual decisions can be affected substantially by social structure" (Wagenaar, 1987:174).

Wehlage and Rutter (1986) reported that school size and other organizational aspects of school contribute to a sense

of alienation and estrangement. The finding that number of students in the school affects the social environment for learning bears similarity to the findings concerning the effects of family size and presence of parents. The structure of the social environment conditions the process of interaction.

Social Interaction and College Attendance

Early on, status attainment studies included measures of peer and teacher interaction with students (Sewell et al., 1969; Alexander et al., 1975). Sewell et al. (1969), in the first formulation of the Wisconsin model of status attainment, employed an "index of significant others' influence" that included youth's report of parental and teacher encouragement for college as well as friends' college plans. The effects of interaction with family, teachers, and friends on occupational attainment are explained in terms of support and encouragement, or lack thereof, of higher educational and occupational aspirations.

Another way of thinking about the effects of social interaction on educational attainment is to regard certain kinds of social interaction as contributing to the integration of the individual into the society -- a society that values and requires evidence of educational attainment. Eckstrom, Goertz, and Pollack (1986), and Wehlage and Rutter (1986) found that dropouts are more alienated than school stayers.

Wagenaar (1987) found that dropouts are characterized by normlessness and social isolation. Stinchcombe (1965) suggested that students who do not participate in extracurricular school activities are more alienated from the academic programs. Rehberg and Schafer (1968) found that educational expectations were positively influenced by participation in school athletics. Hanks and Eckland (1976), on the other hand, found little effect of athletic participation on educational attainment; they did, however, find stronger effects for participation in other extracurricular activities. These findings confirmed those of Otto (1976) and Spady (1970), who developed early formulations of the proposition relating social integration to status attainment. Otto operationalized adolescent social integration as participation in high school extracurricular activities, including athletics, band, chorus, dramatics, debate, 4-H or FFA, the school paper, student government, or hobby clubs.

Participation in extracurricular activities, or more generally, social integration, is seen as mediating the effects of background socioeconomic status. Hanks and Eckland (1976:292) suggest that, "participation in other extracurricular activities...serves an important integrative function in school and college by fostering the acquisition and transference of status across adolescent and adult social systems." Additionally, social participation "encourages

compliance" (p. 292) with the norms and attitudes associated with educational attainment.

Typically, the influence of social interaction, participation, and social integration are examined in the context of the family and the school, and less often at the level of the community:

The tradition growing out of [status attainment] research has concentrated on the individual's mobility as determined by socioeconomic and ethnic background. Unfortunately, most of these studies overlook the significance of another factor: the characteristic of community in which one resides and carries out most activities. As a result, the significance of the social context affecting status attainment, and the consequences for individuals, are also ignored (Semyonov, 1981:359).

Studies measuring community effects on status attainment have produced mixed results. A number of studies found little or no effect of community size on occupational status mobility. Hauser and Featherman (1977:269), in a study analyzing four size categories of urban communities, concluded that "contextual differences varying concomitantly with city size do not alter the process of stratification in significant ways." Other studies agree that individual-level variables exert greater influence on the status attainment process than do community-level variables (Muller, 1974). On the other hand, a number of studies have suggested that size of community is "systematically associated with other contextual characteristics of a locality such as...level of industrialization, economic composition [and] the occupational structure" that do affect the status attainment process

(Semyonov, 1981:361; Blau and Duncan, 1967; Lane, 1968). Blau and Duncan (1967) advanced the view that, due to the greater degree of functional differentiation in larger communities, opportunities for enhanced status attainment are fewer in smaller communities. Lane (1968:741) noted the connection between the socioeconomic class structure and the size and complexity of communities: "A system of stratification interpenetrates with community structure sufficiently to produce divergent patterns of mobility."

Table 2-1
Relationship Between Place of Residence and College Plans:
1957

Place of Residence	Percentage of students Going to College
Farm	21.5
Village	27.9
Small city	33.9
Medium city	37.0
Large city	42.4
Rural	24.7
Urban	37.3

Source: Sewell, 1964:34.

Size of place effects are more pronounced for educational attainment. For over forty years, studies have consistently demonstrated that rural students have lower educational and occupational aspirations and expectations than small-town and urban students (Sewell, 1964; Cobb, McIntire, and Pratt,

1989). During the 1950s and 1960s, the relationship between size of place and college aspirations was positive and linear, as evidenced in Table 2-2.

Table 2-2

Response of High School Sophomores to the Question, "How Far in School Do You Think You Will Get?", by Place of Residence: 1980

Educational expectations	Urban	Percent Suburban	Rural
Less than high school	.7	.3	.8
High school grad only	14.1	13.7	22.8
Less than two years at business or voc. sch.	5.8	6.4	10.2
Two years or more at business or voc. sch.	11.9	10.3	12.8
Less than two years of college	3.2	2.8	2.8
Two or more years of college degree with Associate Degree	12.3	12.6	12.6
Finish college with Bachelors	26.1	27.8	22.6
Master's or equivalent	13.1	14.2	9.0
Ph.d., M.D. or equivalent	12.9	11.8	6.3

Source: Cobb, et al., 1989; High School and Beyond, 1980.

The economic decline of central cities and the corresponding movement of high SES families into suburban areas over the last two decades has produced a curvilinear relationship between educational aspirations and size community of residence, as suggested by Table 2-2. The lowest levels of aspirations continue to be in rural areas, but suburban areas now exceed those of urban areas. Rural

students also perceive less support for college from their parents, teachers and guidance counselors, report lower occupational status aspirations, and have less confidence in their ability to do college work (Cobb, et al., 1989; High School and Beyond, 1980).

Density of population affects the occupational opportunity structure and the demand for education. Recent research suggests that characteristics of the community may also affect the opportunity structure of social interaction (Coleman et al., 1982; Coleman and Hoffer, 1987; Coleman, 1988a; Smith, Beaulieu, and Israel, 1992). Coleman and his associates found that student integration into the community and participation in community organizations was associated with lower dropout rates. According to Coleman, participation in community activities, particularly church, is a measure of what he referred to as "social capital."

Human Capital and Social Capital

Along with the status attainment framework, the principal research orientation to educational attainment has been human capital theory. Human capital theory was first developed by the economists Schultz (1962) and Becker (1962) to account for increases in productivity that could not be explained by improvements in technology or financial capital. The idea behind human capital is that the skills, talents and knowledge of people amount to a kind of "capital" analogous to financial

assets. The theory suggests that, assuming that people are rational, individuals make investments in their human capital stock with the expectation of realizing benefits -- higher income and a better job -- in the future. The principal avenues of human capital enhancement are formal and informal schooling and job training.

Human capital theory, like status attainment research, has generated hundreds of studies. Its appeal lies in the reasonableness and demonstrability of its fundamental proposition, that increased investments in education and training lead to higher incomes and greater productivity. Human capital theory has several weaknesses, however. The "more narrowly individualistic focus" of the human capital approach leads to a "neglect of social structural factors" (Fligstein, Hicks, and Morgan, 1983:291). The concern of Fligstein et al. is with the neglect of the fit of the individual with the structure of the labor market.

The view of education as an investment with calculable returns carries with it the assumption that the individual has the resources necessary to carry out rational educational investment decisions. One implication of this assumption is that low status occupational attainment and low income can be interpreted as a failure to invest on the part of individuals. The role of family class background in determining which students are able to make higher level educational investments tends to be obscured through inattention. Human capital

analysis can predict the economic payoff for each additional increment of education, but cannot explain why some people choose to make investments in their education and some do not.

One reason for this is human capital theory's questionable assumption of more-or-less equal available resources for investment. According to one line of research, another reason for the "failure to invest" in human capital is the lack of "social capital." Social capital theory draws upon human capital theory by way of parallel conceptual structure, yet is consistent with the status attainment tradition that places family stratification position foremost in the causal sequence. While human capital consists of individual skills, talents and knowledge, social capital is comprised of the social resources available to individuals in the form of interaction and networks of interaction. "If physical capital is wholly tangible, being embodied in observable material products, and human capital is less tangible, being embodied in the skills and knowledge acquired by an individual, social capital is still less tangible, for it exists in the relations between persons" (Coleman, 1988b:382-383).

The conceptualization of social relations as a kind of "capital" or resource was developed by James Coleman and his associates (Coleman, 1988; Coleman & Hoffer, 1987; Coleman, Hoffer & Kilgore, 1982). Using the massive High School and Beyond longitudinal survey following some 30,000 high school

sophomores in 1980 and 1982, with somewhat smaller samples in 1984 and 1986, Coleman concluded that supportive interpersonal relations on both the family and the community levels reduces the risk of dropping out and enhances prospects for educational attainment.

At the level of the family, social capital reflects the nature of the relations that exist among family members. The child's access to the parents' human capital--that is, parents educational level, as distinct from the income dimension of socioeconomic status--depends in part on the physical presence or absence of the parents in the home, and in part on the quantity and quality of the interaction between parents and child. A family can have high human capital, yet if the parents do not interact with the children, the human capital is less effective.

At the community level, social capital exists in the norms, social networks, and interactions between adults that facilitate or support educational attainment. The form of interaction most conducive to the enhancement of social capital is referred to as intergenerational closure by Coleman. Intergenerational closure is a relationship structure in which "a child's friends and associates in school are sons and daughters of friends and associates of the child's parents" (Coleman, 1990:318). In such a situation, other adults in the community are available to reinforce norms and values consistent with educational attainment.

This formulation of the characteristics of social capital raises certain questions. On the one hand, the argument is advanced that social capital is a resource to assist the individual in the acquisition of human capital. This formulation is consistent with the economic behavior of the rational actor. On the other hand, social capital is conceptualized as constraining and enabling individual behavior in the manner of a structural variable. Not only is social capital highly intangible, but it embodies what might be regarded as a paradigm clash.

In his definitive statement of the social capital formulation in the article, "Social Capital in the Creation of Human Capital" (1988:S95), Coleman discusses these clashing paradigms:

There are two broad intellectual streams in the description and explanation of social action. One, characteristic of the work of most sociologists, sees the actor as socialized and action as governed by social norms, rules, and obligations. The principal virtues of this intellectual stream lies in its ability to describe action in social context and to explain the way action is shaped, constrained, and redirected by the social context.

The other intellectual stream, characteristic of the work of most economists, sees the actor as having goals independently arrived at, as acting independently, and as wholly self-interested. Its principal virtue lies in having a principle of action, that of maximizing utility."

Coleman sees both of these intellectual streams as being defective as an approximation of reality. Over-emphasis on structural constraints leads to an "over-socialized" conception of the individual, in which the individual has no autonomy or volition, a problem explored also by Wrong (1961).

For its part, the rational actor framework "flies in the face of empirical reality," inasmuch as "persons' actions are shaped, redirected, constrained by the social context; norms, interpersonal trust, social networks, and social organization are important in the functioning not only of the society but also of the economy" (Coleman, 1988a:487).

Coleman advocates a synthesis of these divergent intellectual streams that "accepts the principle of rational or purposive action," connecting this principle with "particular social contexts" (1988a, S96). Coleman envisions a synthesis that "can account not only for the actions of individuals in particular contexts but also for the development of social organization" (1988a:S96), an accomplishment that would amount to the discovery of the heretofore "missing link" between the micro and the macro. Coleman offers the conceptualization of social capital as part of the synthesis, and while he does not quite succeed in theoretically synthesizing the rational actor with social structure, there is merit in his approach.

As a bridge between the rational actor and the social structure, the social capital conceptualization is consistent with the concept of "embeddedness" adopted by Granovetter (1985). Granovetter's concern, similar to Coleman's, was to find a theoretically happy medium between the "undersocialized" individual, or "atomized-actor", on the one hand, and the "oversocialized" conception of the individual as

criticized by Wrong (1961) and by Duesenberry (1960) on the other, who observed that "economics is all about how people make choices; sociology is all about how they don't have any choices to make" (Granovetter, 1985:485).

In his article, "Economic Action and the Social Structure: The Problem of Embeddedness," Granovetter (1985) examines the importance of trust and malfeasance in maintaining and disrupting market behavior while arguing for an "embeddedness" conceptualization:

"The embeddedness argument stresses...the role of concrete personal relations and structures (or "networks") of such relations in generating trust and discouraging malfeasance....The embeddedness approach...threads its way between the oversocialized one of impersonal, institutional arrangements by following and analyzing concrete patterns of social relations. Unlike each alternative...it makes no sweeping (and thus unlikely) predictions of universal order or disorder but rather assumes that the details of social structure will determine which is found" (1985:490).

Granovetter's aim is to retain the rational actor but to superimpose social structure. Coleman's aim is to retain social structure but to bring in the rational actor. He does this by arguing that social capital is a resource for the individual and that this resource inheres in social structure itself (1988a:S98):

If we begin with a theory of rational action, in which each actor has control over certain resources and interests in certain resources and events, then social capital constitutes a particular kind of resource available to an actor.

Social capital is defined by its function. It is not a single entity but a variety of different entities, with two elements in common: they all consist of some aspect of social structures, and they facilitate certain actions of actors...within the structure. Like other forms of capital, social capital is productive, making possible the achievement of certain ends that in its absence would not be possible.

Like physical capital and human capital, social capital is not completely fungible but may be specific to certain activities. A given form of social capital that is valuable in facilitating certain actions may be useless or even harmful for others.

Unlike other forms of capital, social capital inheres in the structure of relations between actors and among actors.

Clearly, Coleman is working from a strong structuralist-functional perspective:

The value of the concept of social capital lies first in the fact that it identifies certain aspects of social structure by their functions, just as the concept "chair" identifies certain physical objects by their function, despite differences in form, appearance, and construction. The function identified by the concept of "social capital" is the value of these aspects of social structure to actors as resources that they can use to achieve their interests (1988a:S101).

Though he does not use the terminology, Coleman's treatment of social capital suggests that, in many cases it represents a latent function of social organizations. For example, church organization provides access to a network of social supports in addition to its primary function of spiritual nurturance.

As examples of aspects of social structure that serve as resources for actors, Coleman points to research by De Graf and Flap (1988) that demonstrates how "informal social resources are used instrumentally in achieving occupational mobility" (Coleman 1988a:S102). He suggests that trust and trustworthiness are aspects of social structure that serve as social capital, inasmuch as more can be accomplished in social relations where such properties are present. Still another form of social capital is norms:

When a norm exists and is effective, it constitutes a powerful, though sometimes fragile, form of social capital. Effective norms that inhibit crime make it possible to walk freely outside at night in a city and enable old persons to leave their houses without fear for their safety. Norms in a community that support and provide effective rewards for high achievement in school greatly facilitate the school's task....effective norms can constitute a powerful form of social capital. This social capital, however, like the forms described earlier, not only facilitates certain actions; it constrains others. A community with strong and effective norms about young persons' behavior can keep them from "having a good time" (1988a:S105)

Social capital, then, is a resource to be used instrumentally by individuals, but is also a structural factor that enables and constrains individual behavior -- "keeps them from having a good time." It enforces norms that encourage and support educational attainment as well as enforcing norms constraining inappropriate behaviors. The most valuable social capital in this regard is produced by certain kinds of social structures more than others, the leading example being what Coleman refers to as intergenerational closure.

Figure 2-3 graphically represents a structure without closure and with closure. In Figure 2-3a, the children, B and C, are friends, but their parents, A and D, do not know each other. In Figure 2-3b, "the parents' friends are the parents of their children's friends" (1988a, S106):

The consequence of this closure is...a set of effective sanctions that can monitor and guide behavior. In the community in figure [2]-3b, parents A and D can discuss their children's activities and come to some consensus about standards and about sanctions. Parent A is reinforced by parent D in sanctioning his [or her] own child, C, but also for the other child, B. Thus, the existence of intergenerational closure provides a quantity of social capital available to each parent in raising his [or her]

children -- not only in matters related to school but in other matters as well (1988b, S107)

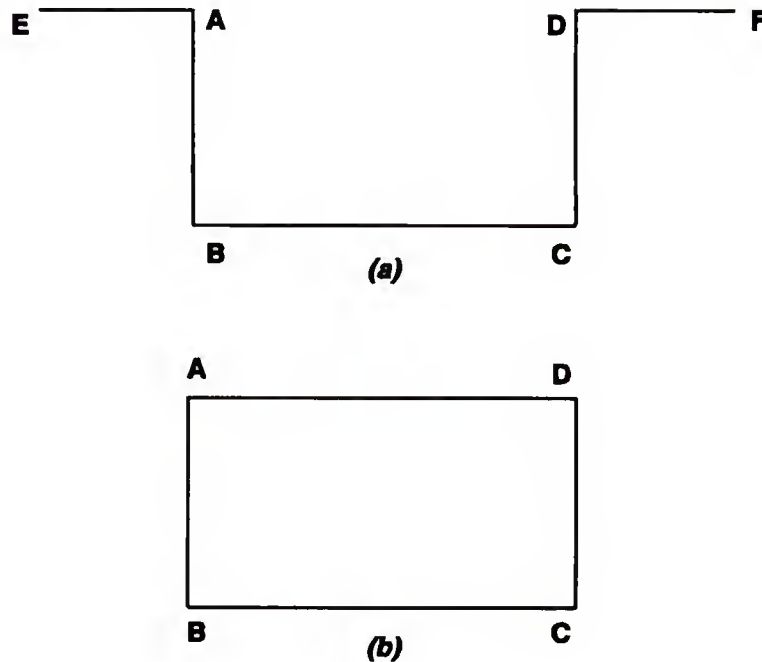


Figure 2-3

Network involving parents (A,D) and children (B,C) without (a) and with (b) intergenerational closure.

SOURCE: Coleman, 1988a.

While it was once the norm, intergenerational closure is no longer very common, Coleman argues, due to the geographical mobility and individualism of modernity (Coleman and Hoffer, 1987; Coleman, 1990; Coleman, 1988b:388):

The social capital of intergenerational closure exists in some isolated small towns and rural areas where the social relations among adults are restricted by geographic distance and residential mobility less important. Intergenerational closure exists in schools based in a religious community, such as Catholic schools, although the social relations which make

up the community are more narrowly focused around a single dimension of social life, the religious institution.... intergenerational closure does not now exist in most modern public schools or in most non-religiously-based private schools. The absence of social capital represents the loss of a resource for young persons.

Coleman and his associates argued that lower dropout rates among Catholic high school students are attributable to the intergenerational closure associated with the communities surrounding Catholic high schools.

Substantial theoretical grounds exist in support of Coleman's pronouncement of the demise of intergenerational closure surrounding public schools. The theme of the "terminal eclipse" (Wilkinson, 1986, p. 4) of the local functional community is based on the view that in modern mass society individuals' functional dependence on local community has been replaced by attachments to outside corporations, national culture and international markets (Warren, 1978). Electronic and satellite technology have contributed to "territory-free networks" of social interaction (Wilkinson, 1990, p. 155). Territorially-based interaction represents only one pattern of community, "a pattern that becomes less and less evident over the course of American history" (Bender, 1978, p. 6).

The "demise of community" thesis has not gone unchallenged, however. Wilkinson (1990, p. 154) argues that: "unless suppressed by barriers to authentic social interaction, community always occurs where people live together, whether or not they realize it and whether or not

they like it." Individuals have many connections to the larger society, yet these connections are made principally through interactions at the local level. Smith et al. (1992) suggest that, granting that modern social conditions tend to erode a sense of local community, the process is nevertheless historical and transformative.

Besides the decline in community social capital, Coleman is concerned about the loss of social capital in the family. The primary reason for this loss is the increase in single-parent (usually single-mother) families and the increase in mothers who work outside the home, seen as a problem for the family and as contributing to the decline of intergenerational closure:

In schools where there are a dense set of associations among parents, these associations are commonly the result of a small number of persons, ordinarily mothers, who do not hold a full-time job outside the home. These mothers themselves experience only a small part of the benefits of the social capital surrounding the school. If one of the mothers decides to abandon these activities, perhaps to take a full-time job, the action may be entirely reasonable from a personal point of view and even from the point of view of that family itself. The benefits of the new activity to the individual and to the family may far outweigh the losses which arise from the decline in associations with other parents whose children are in the school, but the withdrawal of these activities constitutes a loss to all those other parents whose associations and contacts were dependent on them (Coleman, 1988b:389).

Coleman refers to the physical absence of the father or mother as a structural deficiency: "Single parent families and families in which the mother worked before the child entered elementary school represent two forms of structural

deficiency" (1988b:385). Social capital deficiencies are seen as having not only a structural, but also a functional, dimension:

Functional deficiency in the family refers to the absence of strong relations between children and parents despite the physical presence of the family members in the household and the opportunity for strong relations. Functional deficiencies may result from the child's embeddedness in a youth community, from the parents' embeddedness in relationships with other adults which do not cross generations, or from other sources. Whatever the source, the child does not profit from the human capital of the parents because the social capital is absent....

The distinction between the human capital existing in the family and the social capital existing in the family constitutes the critical difference between what may be called the "traditional disadvantage" of background and what I have termed "family deficiencies." Disadvantaged background ordinarily refers to the absence of resources embodied in the parents, represented primarily by the parents' education but also by other variables, such as low economic level or the status of a racial-ethnic minority, which stand as surrogates for low levels of human capital. By family deficiencies, I mean the weakness of the links between the adult members of the family and the children constituting an absence of social capital" (1988b:385).

Critique of the Coleman Analysis

While the social capital conceptualization developed by Coleman makes an important contribution to the study of educational attainment, the conceptual structure is not without its shortcomings. Aside from the dubious appropriateness of treating economic status and race/ethnicity as merely "surrogates" for the educational level of the parents, there are other theoretical problem-areas. First, the claim that social capital provides a theoretical linkage between the micro and the macro levels of analysis may

overstate the value of the concept. Second, the rigidly structural-functionalist formulation of social capital used by Coleman leads to several related problems with understanding the effects of social interaction on educational attainment.

Coleman claims that social capital serves as a "resource" for the individual in his or her efforts to increase human capital stock, but also indicates that social capital functions to enforce norms and values that are consistent with educational attainment, therefore linking micro-level economic behavior and social structure. Where the dependent variable is occupational attainment, it is easy to see how the individual might use informal social networks instrumentally to obtain a job.

Where the dependent variable is completion of high school, or college attendance, the instrumental use of social capital is less probable, though it is possible, as in the situation of a marginal student who has decided that it is important to stay in high school and seeks advice from an adult member of the family, the school or the community. The more typical operation of social capital is in the supportive family, school and community social environment which encourages and enforces pro-educational norms and behaviors.

It should be noted, however, that capital of any variety has a structural dimension as well as an individual one. For example, while the financial capital of the family is known to have a positive effect on the educational attainment of

children, financial capital may also affect the educational attainment process contextually: "Higher social class parents generally live in wealthier neighborhoods, in which more money is available for education. Such increased funds help attract and retain more highly skilled teachers and help provide more specialized services, more instructional resources, more field trips, and better facilities" (Wagenaar, 1987:169-70). Additionally, it might be argued, the human capital, not only of the family, but of the community as a whole, influences the intellectual environment for achievement.

In the case of social capital, the structural dimension is, perhaps, even more salient. While it is possible to think of social norms, for example, as a resource to be used by students, norms and the sanctions that enforce them are more typically considered as factors that constrain and condition the individual. From the individual resources perspective the student trying to decide whether or not to go to college may seek out supportive advice from an adult friend of the parents. From the structural perspective, a network of adults acts as "sentinels" monitoring the activities of children and apprising parents of inappropriate behavior, as well as encouraging appropriate behavior. The principal value of social capital is not so much in serving as a resource for a student who has already made a decision about educational attainment, but is rather in shaping the decision itself.

Unlike investments in financial capital or investments in human capital, the individual does not "invest" in social capital in the same manner as with financial capital and human capital:

There is a property of social capital that differentiates it from both physical capital and human capital. This property of social capital has serious implications for the social, psychological, and cognitive growth of young persons in the United States. In western society in general, physical capital is ordinarily a private good, in that the person who invests in physical capital may capture the benefits produced by the capital through his or her property rights in the capital. The incentive to invest in physical capital is not depressed; there is not a suboptimal investment in physical capital because those who invest in it are able to capture the benefits of their investments [though there may be a suboptimal distribution of the financial capital required to invest in physical capital, ed]. For human capital (at least human capital of the sort that is produced in schools), the person who invests the time and resources in building up this capital reaps its benefits in the form of a higher-paying job, more satisfying or higher status work...

Social capital of the sort that is valuable for a young person's education is not a private good. The kinds of social structures which make social norms possible and the sanctions that enforce them, do not benefit primarily the person or persons whose efforts would be necessary to bring them about. The benefits extend to all those who are part of such a structure (Coleman, 1988b:388-389).

These two frameworks of analysis--rational actor and structural--can be seen as analogous to an optical figure-ground reversal. When the attention is focused on the individual figure, the background loses focus. Conversely, when the focus shifts to the background, the foreground becomes blurred. It is easy to shift back and forth between figure and ground, but difficult to hold both in focus at the same time.

Coleman's solution (1988a:S105), not entirely satisfactory as a formal theoretical formulation, treats the individual as "embedded" in social structure, attempting to retain "the conception of rational action but to superimpose on it social and institutional organization." Superimposition of structure on rational action does not necessarily clarify the theoretical linkages between the two, however. The concept of "social capital," then, does not go a long way toward a theoretical synthesis of micro and macro-level analysis.

Given this caveat, though, the theoretically "looser" formulation used in the present study represents the individual student as purposive and relatively rational and embedded in a structure of relationships in the family, school and community. That structure of relationships enables individuals, while it also constrains individuals. The micro and macro levels are thus integrated to the extent that both levels are taken into account, yet no claim is made here that anything approaching a formal theoretical synthesis is being undertaken.

The abstract progression from physical to financial to human to social capital involves an elegant parallel conceptual structure, to be sure. However, in the sense of theory as a set of interrelated propositions, from which testable hypotheses are deduced as part of process leading to the development of scientific laws, the social capital framework is not a full-fledged, formal "theory." "Much of

what is considered theory in the social sciences consists of conceptual frameworks that direct systematic empirical work" (Nachmias and Nachmias, 1981:42). The social capital formulation is a conceptual framework, or what Turner refers to as an "analytic scheme" (1991:9). Though the social capital model provides a useful arrangement of concepts and understanding of the relationships among those concepts, it is prudent not to over-reach in making claims concerning the theoretical sophistication of the formulation.

Structure and Function

The other problematic aspect of Coleman's theoretical explication of the role of social capital in the educational attainment process lies in the rigid structural-functional approach used. As noted above, Coleman suggests that social capital "identifies certain aspects of social structure by their functions, just as the concept 'chair' identifies certain physical objects by their function" (1988a:S101). This formulation leaves the implication that enforcing and promoting norms and values of educational attainment is a "function" of the family; that staying home and socializing the children to value educational attainment is a "function" of mothers; that it is a "function" of parents to monitor the behavior of their children's friends and to encourage them to stay in school, get good grades and go to college.

Families with single parents--usually single mothers--and families in which the mother worked before the child enters elementary school, are categorized as "structurally deficient" in the Coleman analysis. The working mother is doubly dysfunctional in this view, causing a structural deficiency both in the family and in the community, in the latter breaking the intergenerational closure by "abandoning" the "dense set of associations among parents" when she takes a full time job (she is triply guilty if she is also single).

Social Capital and "Family Values"

Because of its intrinsic concern with system maintenance and stability, structural-functional analysis can be interpreted in a manner consistent with conservative social and political ideology. In the terms of the contemporary public debate over "family values," Coleman's formulation could be construed as implying that the only "functional" family is a two-parent family in which the father works outside the home and the mother stays home to take care of the children, even though Coleman takes pains to acknowledge that the mother's abandonment of her function "may be an entirely reasonable action from a personal point of view and even from the point of view of that household with its children" (1988a:S116).

Granting that the ideal family situation for children includes two parents who love them, Coleman's formulation

places too much responsibility for building and sustaining social capital on the mother, thus neglecting the mutual responsibilities of fathers and mothers to "be there" for their children. The economic fact of life in the 1990s is that in most families both the father and the mother must participate in the labor market. Even in the extremely unlikely event of a major turnaround in the economy such that one salary could support a middle-class lifestyle as in the 1950s and 1960s, while some women would probably return willingly to their traditional role as housewives (like Rosie-the-Riveter cheerfully giving up her factory job for returning World War II soldiers), educated modern women are unlikely to give up the financial and personal autonomy that comes from participation in the labor market.

In any event, there is nothing inherent in the concept of social capital that compels the a priori assumption that a father working while the mother stays home with the children is any more functional than a family in which the mother works and the father stays home to take care of the children or a family in which both parents work and take turns arranging to spend time with the children.

Another problem arising from the strong structural-functional paradigm Coleman uses is the assertion that social capital "inheres" in social structure itself. A certain kind of social capital is said to exist simply because both parents are in the household, for example. The absence of one parent

results in a structural deficiency in the family social capital. However, in the situation wherein both parents are in the household, if the parents do not interact constructively with their children, a functional deficiency is said to exist. Even if we say that the structure is sound but is dysfunctional, social capital can hardly be said to "inhere" in the mere fact of the presence of structure.

Financial capital does not inhere in the structure of the bank, but must be deposited there. Human capital does not inhere in the individual, but must be instilled therein. Similarly, social capital does not inhere in the structure of the family or the community, but is invested in the structure through social interaction. The size, shape and other similar properties of the social structure determine the opportunities for relationships and interaction within the structure. Social capital exists in the relationships between people rather than in the social structure itself, though the structure influences the patterns of relationships. The stability of the family structure may be seen as facilitating nurturance of relationships, therefore assisting in the development of social capital. Investments in social capital are made through the efforts involved in relationships as well as through supports for relationships.

Rather than viewing social capital as intrinsic to social structure and certain kinds of interaction as functions of that social structure, the approach adopted in the present

study is to distinguish between structure and process as complementary components of social capital. Two-parents or one-parent in the household, and whether or not the parents work, each of these family structural factors influence the process of interaction by affecting the density of relationships and frequency of interaction between parents and children. The physical structure of the presence of family members, then, sets the opportunity pattern for social interaction -- process -- in the family.

Though the process of interaction is required in the generation of social capital, social capital does not inhere in the process of interaction per se. This is evident in Coleman's category of functional deficiencies, interaction which does not facilitate productive behavior or enforce norms and values consistent with educational attainment. In other words, since not all interaction qualifies as social capital, social capital cannot be said to inhere in interaction. Both structure and process may be regarded as necessary but not sufficient conditions for the existence of social capital.

The social capital is present, not in the structure of relations, as such, nor in the process of social interaction, as such, but in intangible relationships. The physical structure of the family provides the opportunities and the stability for the growth of relationships. Whether the specific qualities of the relationship qualify as social capital is determined by the process of interaction.

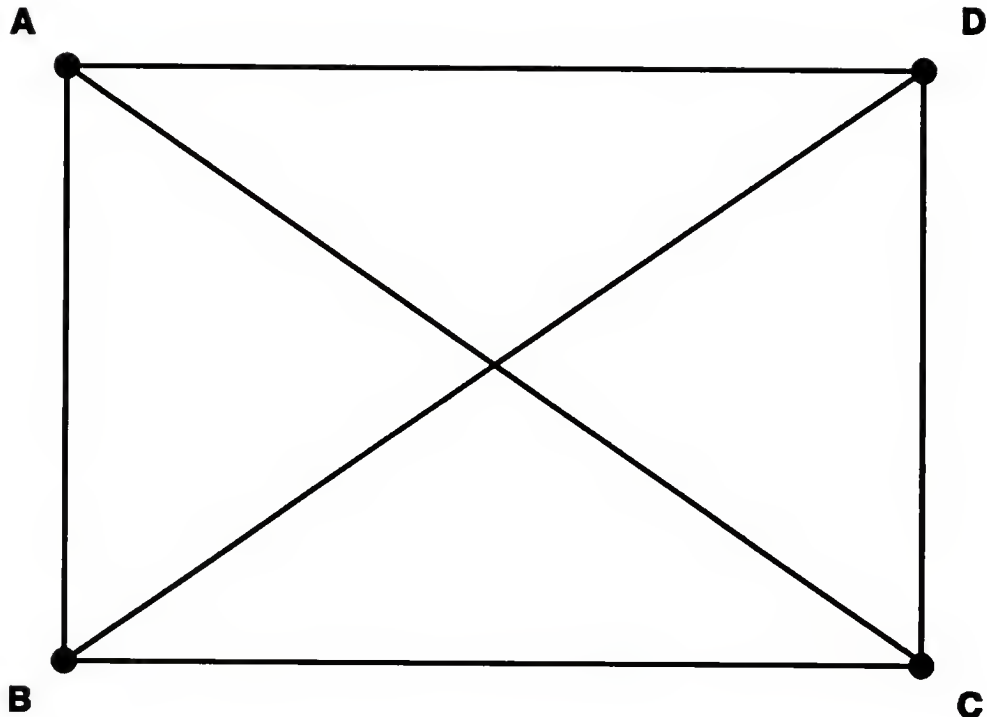


Figure 2-4
A network with closure

Source: Coleman and Hoffer, 1987.

Coleman and Hoffer note:

In a diagram like that of Figure [2-4], representing relations between four persons, A, B, C, and D, the human capital resides in the nodes. Social capital and human capital are often complementary. For example, if B is a child and A is an adult parent of the child, then in order for A to be useful for the cognitive development of B, there must be capital in both the node and the link, human capital held by A, and social capital in the existence of the relation between A and B (Coleman and Hoffer, 1987:222).

The social capital does not exist in the nodes of the structure, the individuals, but are seen as existing in the lines linking the nodes. What do these lines represent? According to Coleman and Hoffer (1987) the lines represent the

relationship between the individuals. Is that relationship the same thing as interaction, though? If interaction is the same thing as a relationship, and is a repository of social capital, then social capital could be operationalized simply as interaction, but the principle has already been established that not all interaction qualifies as, or contributes to the development of, social capital.

Consider what happens when interaction is not taking place. After an episode of interaction concludes and a parent and child go their separate ways, does that mean that the social capital ceases to exist? Interaction is discrete and episodic, whereas relationships exhibit duration and evolution. That is why a loss takes place when a family moves -- relationships developed over some considerable length of time through manifold interactions are terminated. Opportunities for new patterns of interactions may present themselves, but relationships take time to build. Relationship requires structure -- that is, individuals at the nodes -- and requires interaction, but relationship -- as well as social capital -- is not exactly the same thing as the structure of relations nor is it the same thing as interpersonal interaction.

The social capital in a relationship is, as Coleman observed, highly intangible, existing at the levels of meaning as well as of feelings. Trust, love, caring, responsibility, communication, sharing and respect are all qualities of

relationships that facilitate the transmission of values, norms, aspirations and expectations, and contribute to the intellectual and social development of children. The abstract and intangible nature of social capital means that in the present study of college attendance, social capital is treated as an unmeasured concept. Measured instead are more tangible indicators of the necessary conditions for the presence of family social capital: the physical structure of the family and the process of interaction. It is assumed that where the structural and processual prerequisites for the existence of social capital are present, there is a certain unknown but positive likelihood of the presence of social capital. Such an approach is not as neat and clean as simply defining social capital as a certain kind of structure of relations as well as a certain sort of interpersonal interaction, but makes up for these shortcomings by virtue of an enhanced theoretical and logical rigor.

To venture, then, a definition of social capital: Social capital is an intangible quality of relationships in families and communities which constrains and facilitates purposive individual behavior in a manner consistent with the interests of both individuals and the social structure, that is, higher educational attainment. Social capital is invested in relationships through the process of interpersonal interaction. Frequency, duration, density and opportunities for interpersonal interaction are determined by the structure

of relations in the family, the school and the community. This definition is abstract enough to apply to a the broad domain of educational attainment, and, ultimately, status attainment, while addressing the dual nature of social capital as a resource or benefit for the purposive individual and also acting as a structural variable enabling and constraining behavior.

Bringing Status Attainment Back In

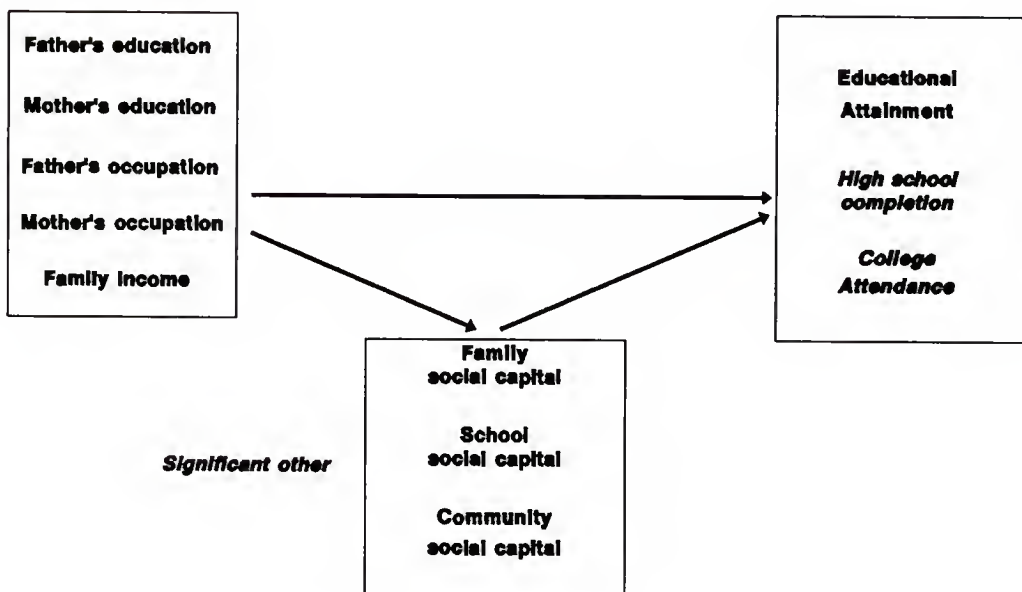


Figure 2-5

Modified status attainment model incorporating and emphasizing elements of the social capital model

The value of the Coleman social capital framework is not so much as a theoretical alternative to the status attainment

approach but more as an innovative extension of the status attainment model. The Coleman framework provides an elaboration of the influence of the "significant other" in a manner that takes account of both structure and social interaction in the family as well as in the community. With some modification, Coleman's social capital scheme contributes unifying themes to the status attainment analytical framework. Superimposing the social capital model over the status attainment model clarifies the role of social capital variables in mediating the influence of family background variables on educational attainment, as illustrated in Figure 2-5.

This model is not so very different from the model developed by Coleman and Hoffer (1986) to account for droppingout behavior among high school students. Coleman and Hoffer's model includes several measures of family background, a composite index of socioeconomic status -- family income, father's education and occupation, mother's education, and household possessions -- and indicators of race and ethnicity. Number of siblings, both parents in the household, and mother worked while child was young are included as indicators of family structure. Mother's expectations for college, and talk with parents are employed as indicators of family process or interaction (function). Number of moves since grade 5 is a proxy measure of community social capital, inasmuch as a student who changes schools because of family moves breaks the

social linkages in the school and community that develop social capital.

Table 2-3

Dropout rates between spring, grade 10, and spring, grade 12, for students whose families differ in social capital, controlling for human capital and financial capital in the family

	Percentage Dropping Out	Difference in Percentage Points
1. Parents' presence:		
Two parents	13.1	
Single parent	19.1	6.0
2. Additional children:		
One sibling	10.8	
Four siblings	17.2	6.4
3. Parents and children:		
Two parents, one sibling	10.1	
One parent, four siblings	22.6	12.5
4. Mother's expectation for child's education:		
Expectations of college	11.6	
No expectation of college	20.2	8.6
5. Three factors together:		
Two parents, one sibling, mother expects college	8.1	
One parent, four siblings, no college expectations	30.6	22.5

SOURCE: Coleman, 1988a:S112.

Coleman (1988a) calculated the probabilities of dropping out, for students whose families differ in social capital. As indicated in Table 2-3, family structure and family interaction combine to produce substantial differences in dropout rates. Between students from families with two parents, one sibling and in which the mother expects the student to go to college, and students from families with one

Table 2-4

Predicted dropout rates in the South between Spring, Grade 10 and Spring, Grade 12, for students whose families and communities differ in social capital, controlling for human and financial capital.

COMMUNITY SOCIAL CAPITAL ^b	FAMILY SOCIAL CAPITAL ^a	
	Low	High
Low	47.7%	11.9%
High	15.2	2.6%

SOURCE: Smith, Beaulieu, and Israel, 1992:84.

^aHigh family social capital is defined as: (1) two parents present; (2) one sibling; (3) mother did not work when child was young; and (4) mother expects child to go to college. Low family social capital is defined as: (1) one parent present; (2) four siblings; (3) mother worked full-time when child was young; and (4) mother has no expectations for college.

^bHigh community social capital is defined as: (1) child has never changed schools since grade 5 because of a family move; and (2) child participates actively in church activities. Low community social capital is defined as: (1) child has changed schools 3 or more times since grade 5 because of family moves; and (2) child does not participate in church activities.

parent, four siblings, and no college expectations, Coleman found a 22.5 percent difference in the probability of dropping out. Emulating the Coleman model, but with an additional measure of community social capital, church attendance, Smith et al. (1992) found that community social capital exerts a substantial separate effect on dropping out and that family and community social capital combine to produce surprisingly large effects, as can be seen in Table 2-4. When both community and family social capital are low, the probability of dropping out is 47.7 percent, odds of about 50-50. When

family social capital is high and community social capital is low, or community social capital is high and family social capital is low, the predicted probability of dropping out is about the same, between 12 and 15 percent. This suggests that high levels of either family or community social capital can compensate to a large degree for low levels of the other. However, when both community and family social capital are high, students are virtually assured of graduating.

The Model Used in the Present Study

Table 2-5

Family background and social capital variables in the social capital model used in the analysis of college attendance, with examples of indicators

<u>Family Background Variables</u>	<u>Social Capital Variables</u>
<u>Financial Capital</u>	<u>Family Structure</u>
Family income	two-parent/one-parent
	mother works
<u>Family Human Capital</u>	<u>Family Process</u>
Father's Education	parents encourage college
Mother's Education	parents monitor activities
	<u>School Structure</u>
	public or private school
<u>Sex</u>	<u>School Process</u>
<u>Race</u>	school social environment
	<u>Community Structure</u>
	community size (rurality)
	<u>Community Process</u>
	participation in community organizations

The present analysis extends the work of Coleman in two ways: First, the social capital model is applied to college attendance instead of high school completion; and second, the

conceptualization is extended to reflect the logical implications of the notion of "embeddedness" of the individual in social structure.

Table 2-5 presents the family background variables and social capital variables used in the analysis. While Coleman used a composite SES measure, the model used here disaggregates SES and looks separately at the effects of family financial capital (family income) and family human capital (educational level of the parents). Out of concern for parsimony and possible multicollinearity, parents' occupational status is not included in the model. Race and gender are included as important control variables.

Though Coleman discussed the role of community social capital, he made no systematic effort to measure its effects, nor did he give attention to the effects of school structure and school social interaction on educational attainment. In the present study, utilizing the same dataset used by Coleman, the social capital variables reflect the view of the individual as progressively embedded, or nested, in the family, the school, and the community. At each level of social organization, the presence or absence of social capital is seen as dependent upon structural and process variables. At each level -- the family, the school, and the community -- the indicators of the necessary conditions for the presence of social capital mediate the effects of family background variables on the process of college attendance.

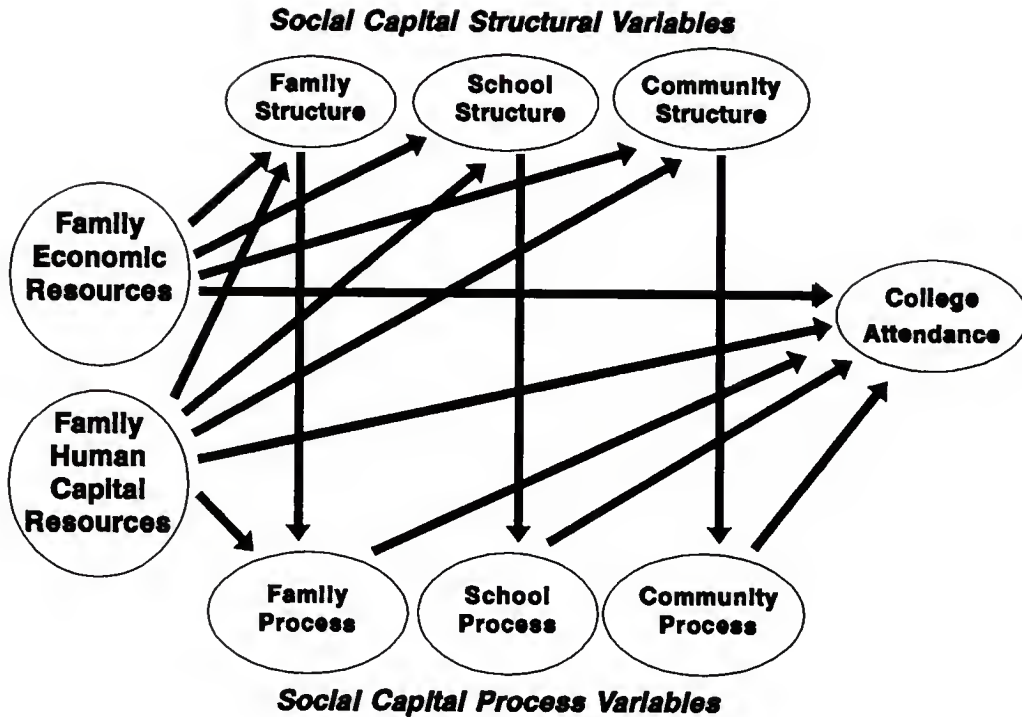


Figure 2-5
Conceptual model of college attendance emphasizing
 relationship between structure and process variables

Figure 2-5 graphically depicts the theoretical relationships among the principal concepts of the social capital model used in the present analysis. The arrows show the logical causal direction of the relationships, though no path coefficients will be estimated. The theoretically important -- theory used here in the broad sense of a logical arrangement of concepts -- family background variables are the family economic resources and the parents educational level. Both of these factors are seen as exerting direct influence on

college attendance, but also exert indirect effects through family, school, and community structural and process variables. Family background variables influence the nature of the family structure as well as influencing the type of school and community. The structural variables influence the quality and frequency of the interaction represented by the process variables.

The family, school, and community structural variables are regarded as exerting separate effects on college attendance through their intervening effects on family, school and community process variables, thereby mediating the effects of family income and parental education on college attendance. While structural variables are seen as exerting substantial influence over interaction in family, schools and communities, as represented by the process variables, the process variables are not completely determined by the structural variables. Family, school and community process variables are viewed as exercising independent effects on college attendance, mediating the impact of family, school and community structure.

Research Questions

Research Question: Do indicators of family, school and community structure exercise significant effects on college attendance net of

family background factors, i.e., family income, and parental education?

Family Background

Hypothesis: Family income is positively associated with college attendance.

Hypothesis: Father attending college is positively associated with child attending college.

Hypothesis: Mother attending college is positively associated with college attendance.

Family Structure

Hypothesis: Both parents in the household is positively associated with college attendance.

Hypothesis: Mother working is negatively associated with college attendance.

Family Process

Hypothesis: Parental interest in their children's school work and encouragement of academic attainment is positively associated with college attendance.

School Structure

Hypothesis: School type is negatively related to college attendance.

School process

Hypothesis: Student report of problems with high school social interaction climate is

negatively associated with college attendance.

Hypothesis: Participation in school extracurricular activities is positively related to college attendance.

Community Structure

Hypothesis: Size of place is curvilinearly related to college attendance, with suburban students experiencing higher college attendance than rural and urban students.

Hypothesis: Low number of family moves is positively associated with college attendance.

Community process

Hypothesis: Church attendance is positively related to college attendance.

CHAPTER 3 METHODOLOGY

Description of Secondary Data Set

Answers to the research questions are sought through the use of the High School and Beyond (HS&B) data set. The High School and Beyond longitudinal study was conducted by the National Opinion Research Center on contract with the National Center for Education Statistics, U.S. Department of Education. The base-year survey, conducted in the Spring of 1980, involved a two-stage, national probability sample. In the first stage, 1,122 schools were selected for the sample out of a sampling frame of 24,725 (NCES, 1991). Certain strata of schools were oversampled to facilitate analysis of sub-populations of interest, for example, alternative public, Hispanic Catholic and public, high performance private, and other non-Catholic private schools. In the second stage, 36 sophomores and 36 seniors were randomly selected from each school. Ultimately, over 58,000 sophomores and seniors from 1,015 public and private high schools took part in the study (84 percent of the eligible sample).

Each student completed a set of questionnaires that were designed to elicit information on individual/family background characteristics, high school experiences, work experiences,

and future plans. Students in both cohorts also took a series of timed cognitive tests. The sophomore and senior questionnaires shared about 75 percent of questions in common. Questionnaires were administered on school premises by NORC survey representatives (NCES, 1991). Base year survey instruments included: (1) a sophomore questionnaire, (2) a senior questionnaire (3) cognitive tests for both sophomores and seniors (4) a school questionnaire, (5) teacher questionnaire, and (6) a parent questionnaire.

A follow-up study conducted during the early part of 1982 was targeted to all 1980 sophomores (now seniors) who participated in the 1980 survey. The intent of the follow-up was to continue documentation of the secondary school experiences of high school students. For persons who remained in school, a near-duplicate version of the survey instrument administered two years earlier was employed. As in the case of the 1980 survey procedures, in-school group administration of survey instruments took place (NCES, 1991).

The 1984 and final 1986 waves focused attention on post-high school experiences: college attendance, work experience, marriage, and future plans. For both 1984 and 1986, a sample of 15,000 participants in the 1982 wave were mailed questionnaire packets. Follow-up by telephone interview and personal visits yielded completion rates of 91 percent in 1984 and 90.6% in 1986 (NCES, 1991).

Other High School and Beyond files include the High School Transcript File, which includes information on all courses taken during the four years of high school, grade point averages, standardized test scores, and days absent. Course offerings and enrollment data for 957 schools are available in the Offerings and Enrollment File. The HS&B HEGIS and PSVD File contains data on post-secondary educational institutions attended by HS&B respondents. This data includes type of institution, degrees offered, admission requirements, enrollment, and tuition (NCES, 1991).

Because certain strata -- such as racial and ethnic minorities -- are oversampled for policy-relevant reasons, weights are calculated for each wave. Weights are calculated as the inverse of the probability of selection in a survey, adjusted to compensate for "unit" nonresponse, such as failure to complete a whole questionnaire or combination of data elements (NCES, 1991). The inclusion of relevant sophomore cohort weights in the variable list "projects" to the population of 3,781,000 high school sophomores in 1980 (NCES, 1991).

Measurement of Variables

Table 3-1 outlines the variables to be examined and specifies the manner in which they are to be measured. Coding for several variables follows Coleman's coding approach, though in some cases a somewhat different coding scheme is employed.

Table 3-1
Variables used in the analysis, and their measurement.

Variables	Coding Scheme
<u>Dependent Variable</u>	
College attendance (PSESFE84)	1= attended 2-year or 4-year college by Feb. 1984; 0= did not attend college by Feb. 1984
<u>Independent Variables</u>	
<u>Family Financial Resources</u>	
Family Income INCOME (FAMINC)	4=less than \$8,000; 11.5=\$8,000-\$14,000; 17.5=\$15,000-19,999; 22.5=\$20,000-24,999; 27.5=\$25,000-\$29,999; 35.0=\$30,000-\$39,999; 45.0=\$40,000-\$49,000; 50.0=\$50,000 or more; 0=missing
FAMINCX (FAMINC)	1=missing on INCOME; 0=otherwise
<u>Family Human Capital Resources</u>	
Father's Education FATHERED (BB038)	1=father attended college; 0=high school graduate or less
FEDX (BB038)	1=missing on FATHERED 0=otherwise
Mother's Education MOTHERED (BB039)	1=mother attended college; 0=high school graduate or less
MEDX (BB039)	1=missing on MOTHERED 0=otherwise
<u>Background Control Variables</u>	
Race (contrasts with white) BLK (RACE)	1=Black
HISP (RACE)	1=Hispanic
SEX	1= female; 0= male

Table 3-1, continued.Family Social CapitalFamily Structure

Both Parents

BOTHPAR (BB036B-BB036E) 1= both parents in household; 0= one parent in household

Table 4-1, continued.

Mother Worked

MAWORK (BB037A) 1=mother worked full-time while respondent was in high school; 0=mother did not work full-time while respondent was in high school

Family Process Variables

Parental Involvement

INTERPAR (BB050B
BB046A-B; BB046C)

Additive scale constructed by summing: 1= mother expects college for respondent; 0= mother does not expect college; 1= father expects college for respondent; 0= does not expect college; 1= father monitors respondents's school work; 0= father does not monitor school work; 1= mother monitors school work; 0= mother does not monitor school work; 1= "true" response to statement, "my parents always know what I'm doing"; 0= "false" response

School Social CapitalSchool Structural Variables

Type of High School

HSTYPE 1=private school, religious or otherwise; 0=public school

School Process Variables

School Environment

INTERSCH (YB019A-YB019F) Additive scale constructed by assigning 2 points for response, "Often happens", and 1 point for "Sometimes happens", for following measures: students do not attend

Table 3-1, continued.

school; students talk back to teachers; students do not obey instructions; students fight with each other; students attack teachers

Community Social Capital
Community Structural Variables

Size of Place (contrasts with suburban)

SCHURB1 1=urban;
 SCHURB2 1=rural;
 (SCHURB) 0=suburban

Table 4-1, continued.

Number of moves

since grade 5 1=respondent has changed schools 2 or 3
 MOVES (BB011) times since grade 5 due to family moves;
 0=respondent has changed school 1 time or
 less due to family moves since grade
 schools since starting 5th grade

Church Attendance

CHURCH (BB032N) 1= respondent attends church; 0=
 respondent does not attend church

Note: Variable names are given in all-capital letters. Original tape-names are given in parentheses if different.

Discussion of the Variables and Coding Scheme

The choice of variables and coding scheme represents an extension and refinement of the model used by Coleman and his associates. The present study retains several of the social capital variables used by Coleman, such as number of parents in the household and mothers' work status, though the coding differs to some extent. Additional measures have been included to reflect the parallel conceptual arrangement of

structural and processual social capital precursors at the level of the family, the school and the community.

Disaggregation of SES

An innovation of the study is that of disaggregating the socioeconomic status variable (SES). Typically, researchers using the High School and Beyond data set utilize a composite SES measure made up of five components, including father's occupation, father's education, mother's education, family income, and scale of eight household items. Such indexes are useful, but can result in uncertainties in interpretation, since three or more dimensions -- education, income, occupation, and possessions -- are treated as a single dimension -- socioeconomic status. Coleman drew the conceptual distinction between family financial capital and family human capital, but used the composite measure in his model. Disaggregation of the measure will allow for the examination of the effects of family human capital (FATHERED and MOTHERED) separate from family financial capital (INCOME). FATHERED and MOTHERED are both coded as either attending college or not attending college. Approximately 25 percent of respondents declined to answer the INCOME question, and about 16 percent indicated that they did not know how much education their parents had. In order to retain these cases in the data set, dummy variables -- FAMINCX, FEDX, and MEDX -- were coded as 1 when cases were missing on INCOME, FATHERED and MOTHERED, respectively, and were coded 0 otherwise.

Family Structure and Family Process Variables

Family structure variables are consistent with those used by Hansen and McIntyre (1989) and Coleman (1988), with the exception that the mother work measure in Coleman's research looked at mother working prior to elementary school, whereas the present study examines the effects of mother working during elementary school and during high school (MAWORK). The family structure variables -- mother working, number of parents in household (BOTHPAR) -- determine the opportunity structure for interactions within the family. Mother working means she may have fewer opportunities to interact, while single parent household likely means fewer opportunities for parent-child interaction.

While family structure indicators attempt to measure opportunities for family social interaction, the family process indicator is intended as a measure of family interaction itself, particularly parent-child interaction that encourages college attendance or otherwise reinforces norms and values of achievement. Several questionnaire items were combined into an additive scale to measure family process (INTERPAR): father and mother monitor school work, parents keep track of what the respondent is doing, father and mother expect respondent to go to college. Social capital measures are not indicators of social capital as such. Measures of the structure of family relations and the process of family

interaction are treated as indicators of the precursors of social capital.

School Structure and School Process Variables

Type of high school -- public or private high school (HSTYPE) -- is included in the model as an indicator of school structure. Coleman and Hoffer (1987) found that students in private schools had lower dropout rates. This was especially true for Catholic high schools, but was also the case for other religious-oriented high school. The effect is attributed by Coleman and Hoffer, not to the religious content of the schooling, but to the functional community they argue envelopes the school which provides opportunities for intergenerational closure. The present inquiry incorporates type of school in order to ascertain whether that school effect carries over from dropping out to college attendance. The measure of school social process is INTERSCH, an additive scale constructed by summing reports of a number of school problems such as students fighting in school, students threatening teachers and chronic absenteeism.

Community Structure and Community Process

Community social capital variables represent the degree to which students are socially integrated into the community as well as the structure of opportunities for social interaction. Number of moves and size of place are incorporated into the model of college attendance as measures of community structure. Number of moves since grade 5

reflects the student's access to community social capital. Students who move from school to school do not stay in a community long enough to become integrated into the social structure by establishing long-term relationships. Size of place in which the school is located is included because human and financial resources are most likely to be constrained in certain places such as inner cities and rural areas. People living in rural counties are more likely to suffer from poverty, unemployment and underemployment, and are less likely to have a high level of education (Beaulieu 1988; O'Hare 1988; Reid 1989; Tweeten 1988). Rural students are more likely to report that they would be satisfied with less education than suburban or urban students, as well as reporting lower levels of aspirations to professional occupations and higher levels of aspirations to achieve lower-status occupations such as craftsperson or service occupation (Hansen and MacIntyre, 1989). Differences in the density of population and the spatial dispersion of residential and business activities might plausibly be seen as leading to different patterns of social interaction and hence development of social capital.

Since Durkheim's Suicide, church attendance has been used as an indicator of social integration. As noted by Coleman, churches are 'multiplex' organizations which serve functions other than those originally intended, such as providing opportunities for intergenerational closure. Church

attendance, then, is indicative of the youth's integration into the community's social structure.

Statistical Analysis

Because the dependent variable is the dichotomous question of college attendance or non-attendance, an appropriate statistical procedure appears to be use of logistic regression (Alexander et al., 1987). Multiple logistic regression is considered to be the preferred method for estimating, for a given individual, the probability of a certain event occurring, in this case attending college. A major advantage of logistic regression is that the independent variables can be categorical, ordinal, interval, or a combination of all three. The parameter estimates obtained through multiple logistic regression are similar in interpretation to those of multiple linear regression. The overall fit of the model is indicated by the model chi-square, degrees of freedom, and probability levels. A large model chi-square and small probability level indicate that the model is a significant improvement over an intercept-only model.

The research questions are to be answered by estimating probabilities based on selected levels of the independent variables in the fitted model. These probabilities are derived from the logits (log odds) of attending college given one or more characteristics, while controlling for the effects of other factors. The latter are set at their mean or most

common value in calculating the logits. The form of the equation used to calculate the probability of attending college at different levels of the independent variables is as follows:

$$\text{probability (pi)} = e^{a+b_1x_1+\dots+b_kx_k} / [1 + e^{a+b_1x_1+\dots+b_kx_k}]$$

Alternately, the equation can be written in this manner:

$$\log(\text{pi}/1 - \text{pi}) = a + b_1x_1 + \dots + b_kx_k$$

Taking the antilog of both sides of the equation yields the following equation:

$$\text{pi}/1 - \text{pi} = e^{a + b_1x_1 + \dots + b_kx_k}$$

The implications of the exponential form of the right side of the equation is that each x level of the independent variables has a multiplicative effect of e^b on the probability of falling into the 1 category of the dichotomous dependent variable, in this case attending college (Agresti and Finlay, 1986:485-486).

The model is analyzed using SAS's logist procedure on mainframe computer. Participation flags are selected for each wave and the appropriate weight variable is included in order to correct for oversampling in certain strata -- such as race and school type -- and for non-response bias. Use of participation flags includes in the dataset only those 1980 sophomores who participated in each of the subsequent waves. This stipulation resulted in the reduction of the sample from 14,825 to 8,062 cases. Of these 8,062 cases, 5225 respondents

were white, 880 were black, 1,493 were Hispanic, and the remainder were of other races.

CHAPTER 4 FINDINGS

This chapter presents the findings of the statistical procedures conducted using the social capital model of college attendance adopted for this study. These data will be presented primarily in tabular form in a manner designed to address the research questions articulated in Chapter 2. In order to assess the impact of race\ethnicity and sex, the social capital model is analyzed separately for whites, blacks and Hispanics, with statistically significant sex interactions included. Table 4-1 presents the correlation coefficients for the variables used in the model.

As displayed in Table 4-1, the strongest correlate of college attendance is parental involvement, with a coefficient of .36, followed by father's education (.28), mother's education (.27), and income (.19). Other correlates of college attendance include Hispanic (-.12), high school type (.15), and church attendance (.11). Income is positively correlated with father's education (.28) and mother's education (.20). Income is also positively correlated with both parents in the household and parental involvement, indicating that higher income families are more likely to have both parents in the household and to have higher parental involvement.

Table 4-1
Correlation coefficients for variables used in the model

	Col	Inc	Inx	Sex	Fed	Fdx	Med	Mdx	Blk	Hsp	Par
Col	1.00	.19	-.03	.01	.28	-.12	.27	-.09	-.06	-.11	.05
Inc	.19	1.00									
Inx	-.03	-.55	1.00								
Sex	.01	-.04	.01	1.00							
Fed	.28	.28	-.03	-.05	1.00						
Fdx	-.12	-.17	.07	.05	-.43	1.00					
Med	.27	.20	-.03	.01	.38	-.15	1.00				
Mdx	-.09	-.10	.09	-.01	-.19	.46	-.30	1.00			
Blk	-.06	-.12	.05	-.14	-.14	.19	-.07	.11	1.00		
Hsp	-.11	-.08	-.00	-.04	-.12	.08	-.10	.05	-.12	1.00	
Par	.05	.16	.02	-.04	.16	-.38	.00	-.07	-.20	-.05	1.00
Mo	-.05	-.03	.01	.02	-.07	.09	.07	-.01	.13	-.00	-.17
Inv	.36	.20	-.03	.20	.31	-.22	.24	-.13	-.10	-.06	.25
Hs	.15	.08	.05	.01	.11	-.04	.11	-.02	-.06	-.04	.04
Sch	-.07	-.02	-.04	.02	-.03	-.01	-.04	-.01	.02	-.00	-.01
Urb	-.04	-.07	.02	.03	-.09	.11	-.06	.09	.21	.08	-.09
Rur	-.08	-.12	-.00	-.02	-.07	-.04	-.05	-.05	-.06	.01	.02
Chu	.11	.00	-.00	.11	.05	-.06	.08	-.06	.04	-.03	.03
Mov	-.08	-.01	-.01	.02	-.01	.10	.01	.05	.04	.03	-.10

Table 4-1, continued.

	Mo	Inv	Hs	Sch	Urb	Rur	Chu	Mov
Mo	1.00							
Inv	-.09	1.00						
Hs	-.03	.11	1.00					
Sch	.03	-.06	-.32	1.00				
Urb	.03	-.02	-.01	.00	1.00			
Rur	-.01	-.05	-.10	.01	-.34	1.00		
Chu	-.02	.14	-.02	.02	-.01	.06	1.00	
Mov	.03	-.06	-.02	.02	.04	-.06	-.2	1.00

Note: Col=college; Inc=family income; Inx=missing on income; Fed=father attended college; Fdx=missing on father's education; Med=mother attended college; Mdx=missing on mother's education; Blk=black; Hsp=Hispanic; Par=both parents in household; Mo=mother worked; Inv=parental involvement; Hs=private school; Sch=school social climate; Urb=urban; Rur=rural; Chu=attends church; Mov=number of moves

Tables 4-2 through 4-4 give the means and standard deviations for the variables used in the logistic regression model run separately for whites, blacks and Hispanics. Income for white families averaged about \$27,000, compared to \$20,000 for blacks and \$23,000 for Hispanics. The sample included more females than males, especially among blacks. About twice as many white students as contrasted to black or Hispanic students had fathers who had attended college. A smaller proportion of students in each of the race/ethnic groups had

mothers who had attended college, except among blacks. Almost 90 percent of white respondents were from two-parent homes, compared to 81 percent for Hispanics and 63 percent for blacks. Black mothers worked full-time at substantially higher rates (65 percent) than either Hispanics (44 percent) or Whites (41 percent). Blacks tended to be more concentrated in urban areas (42 percent), whereas whites were more concentrated in suburban areas (46 percent). Whites were least likely to have moved more than once since fifth grade (13 percent) and blacks were most likely (18 percent). Blacks were more likely to attend church (47 percent), while Hispanics were least likely (36 percent).

Table 4-2

Means, and standard deviations for variables used in the model, for whites

Variable	Mean	S.D.
Family income	26.51	14.01
Sex	0.54	0.498
Father attended college	0.40	0.489
Mother attended college	0.35	0.476
Both parents in household	0.88	0.327
Mother worked while child in high sch.	0.41	0.492
Parental involvement	3.73	1.369
Private or public high school	0.12	0.321
Reports of school social problems	8.67	2.558
School in rural area	0.34	0.475
School in suburbs	0.46	0.498
School in urban area	0.14	0.344
Number of moves since grade 5	0.13	0.339
Church attendance	0.41	0.492
Number of white students	4,933	
Percentage attending college	58.8	

Table 4-3

Means, and standard deviations for variables used in the model, for blacks

Variable	Mean	S.D.
Family income	20.46	11.629
Sex	0.62	0.486
Father attended college	0.16	0.363
Mother attended college	0.23	0.420
Both parents in household	0.63	0.483
Mother worked	0.65	0.477
Parental involvement	3.24	1.456
Private or public high school	0.05	0.216
Reports of school social problems	8.88	3.028
School in rural area	0.25	0.431
School in suburbs	0.34	0.472
School in urban area	0.42	0.494
Number of moves since grade 5	0.18	0.385
Church attendance	0.47	0.499

Number of black students 754
 Percentage attending college 56.9

Table 4-4

Means, and standard deviations for variables used in the model, for Hispanics

Variable	Mean	S.D.
Family income	22.85	12.614
Sex	0.48	0.500
Father attended college	0.19	0.396
Mother attended college	0.19	0.394
Both parents in household	0.81	0.395
Mother worked while child in high sch.	0.44	0.497
Parental involvement	3.41	1.425
Private or public high school	0.08	0.268
Reports of school social problems	8.69	2.961
School in rural area	0.31	0.464
School in suburbs	0.42	0.493
School in urban area	0.27	0.446
Number of moves since grade 5	0.16	0.371
Church attendance	0.36	0.480

Number of Hispanic students 1,315
 Percentage attending college 50.7

Table 4-5 displays the logistic regression coefficients and standard error terms for the white sub-sample. With only a few exceptions, nearly all of the variables in the model have a statistically significant association with college attendance. As expected, income is positively associated with attendance. Females are less likely to attend college, though this is a very small effect. Parents' education is positively associated with attendance for both fathers and mothers. At first glance, it is surprising that both parents in the household is negatively associated with attendance, holding parental involvement constant. For girls, the association is less negative, as suggested by the interaction term. The negative effect of both parents in the household is apparently an artifact resulting from the nature of the coding, inasmuch as both parents in the household is positively correlated with the parental involvement score and the logistic regression procedure is looking at the effect of two-parent households on college attendance, holding parental involvement constant. A two-parent household with a parental involvement score of 3 does not reflect the same degree of involvement as a single-parent household with a score of three.

Mother working is negatively related to college attendance, while parental involvement is strongly positively associated with attendance. Attending a private high school is positively associated with college attendance, but the effect of school social climate is not statistically significant.

Table 4-5

Logistic regression coefficients, standard errors, and probability levels for variables used in the social capital model of college attendance, for whites, with sex interactions.

Variable	Coefficient	Std. Error
Intercept	-1.635	0.231
<u>Family background and sex</u>		
Family income	0.014***	0.003
(Missing on family income)	0.195	0.148
Father attended college	0.522***	0.079
(Missing on father's education)	0.098	0.100
Mother attended college	0.758***	0.077
(Missing on mother's education)	0.298*	0.107
Sex	-0.459***	0.191
<u>Family social capital indicators</u>		
Both parents in household	-0.840***	0.158
Mother worked	-0.282*	0.067
Parental involvement	0.507***	0.028
<u>School social capital indicators</u>		
Private or public high school	0.521***	0.115
Reports of school social problems	-0.025*	0.014
<u>Community social capital indicators</u>		
Rural	-0.182	0.072
Urban area	-0.078	0.098
Number of moves since grade 5	-0.241	0.147
Church attendance	0.410***	0.067
<u>Sex interactions</u>		
Sex . Both parents in household	0.405*	0.200
Sex . Number of moves	-0.569**	0.196

*** p < .001

** p < .01

* p < .05

Urban or rural residence are likewise statistically insignificant. Church attendance has a positive association with college attendance. The main effect of number of moves is not statistically significantly related to attendance, for males, but the sex interaction with moves has a negative sign,

indicating that girls are more adversely affected by family moves than boys.

Table 4-6 presents the logistic regression coefficients for the model run on the black sub-sample. Only three variables in the model are strongly statistically associated with college attendance. Mother attended college displays a substantial positive association. Sex is strongly positively associated with attendance, indicating that black females are considerably more likely to attend college. As was the case with the white group, parental involvement displays a strong positive statistical association. The two-way interaction between parental involvement and sex is negatively associated with attendance, indicating that black females do not benefit from parental involvement as much as black males do. Attending private school is shown to be positively related to college attendance at the .05 level of statistical significance.

Also noteworthy are the variables that failed to achieve statistical significance. Both family income and father's education fell far short of significant association with attendance. The family structure variables, number of parents in the household and mother worked, also failed to achieve statistical significance. Of the three racial/ethnic groups, black mothers worked at the highest rate (65 percent) and had the lowest proportion of two-parent households, yet these factors had little effect on black college enrollment.

Additionally, none of the community measures are shown to have any significant relationship to college attendance.

Table 4-6

Logistic regression coefficients, standard errors, and probability levels for variables used in the social capital model of college attendance, for blacks, with sex interactions.

Variable	Coefficient	Std. Error
Intercept	-3.266	0.607
<u>Family background and sex</u>		
Family income	0.012	0.009
(Missing on family income)	0.637	0.356
Father attended college	0.200	0.265
(Missing on father's education)	-0.073	0.231
Mother attended college	0.832***	0.218
(Missing on mother's education)	-0.585*	0.245
Sex	1.797***	0.514
<u>Family social capital indicators</u>		
Both parents in household	-0.205	0.205
Mother worked	0.107	0.176
Parental involvement	0.789***	0.119
<u>School social capital indicators</u>		
Private or public high school	0.872*	0.427
Reports of school social problems	0.015	0.029
<u>Community social capital indicators</u>		
Rural	-0.176	0.231
Urban area	-0.163	0.197
Number of moves since grade 5	0.046	0.220
Church attendance	-0.153	0.172
<u>Sex interactions</u>		
Parental involvement*sex	-0.546***	0.140

Table 4-7 includes the logistic regression coefficients for the variables in the social capital model for the Hispanic sub-sample. As with the black group, family income is not a significant factor in college attendance, controlling for the other variables in the model. It is interesting to note that

the design variable for those missing on the income variable -- a group comprising about 25 percent of the overall sample -- is negatively associated with college attendance. It may be that low income students would be more likely to decline to answer a question about their family income and because there are more low income students, the group missing on income is negatively associated with college attendance.

Table 4-7

Logistic regression coefficients, standard errors, and probability levels for variables used in the social capital model of college attendance, for Hispanics.

Variable	Coefficient	Std. Error
Intercept	-2.577	0.394
<u>Family background and sex</u>		
Family income	0.007	0.006
(Missing on family income)	-0.810*	0.345
Father attended college	0.803***	0.182
(Missing on father's education)	0.077	0.181
Mother attended college	0.402*	0.173
(Missing on mother's education)	-0.568**	0.204
Sex	0.414**	0.132
<u>Family social capital indicators</u>		
Both parents in household	-0.138	0.196
Mother worked	0.379**	0.134
Parental involvement	0.375***	0.054
<u>School social capital indicators</u>		
Private or public high school	1.108***	0.251
Reports of school social problems	0.021	0.025
<u>Community social capital indicators</u>		
Rural	-0.592***	0.163
Urban area	-0.024	0.160
Number of moves	0.042	0.177
Church attendance	-0.192	0.139

Hispanic females were more likely to attend college, a finding also in agreement with the black group. Father's

education is strongly associated with attendance, while mother's education is less so. Mother working is positively associated with attendance for Hispanics, rather than negatively, as is the case for whites. Consistent with the other two racial/ethnic groups, parental involvement is strongly positively associated with attendance. Other strong associations include the positive association between attending a private high school and attendance, as well as a strong negative association between rural residence and college attendance.

Family Background Influences on College Attendance

First among the hypotheses tested by the logistic regression analysis of the High School and Beyond data were those pertaining to family background factors. Specifically, it was hypothesized that the variables family income, father attends college, and mother attends college, are all positively associated with college attendance. As Table 4-5 confirms, for whites these hypotheses are strongly statistically supported. For blacks, however, while the hypothesis concerning mother's education is supported, statistical significance was not achieved for father's education and family income. For Hispanics, the hypotheses concerning father's education and mother's education were supported, but not the hypothesis of an association between income and college attendance. This does not necessarily mean

that income is not important for blacks and Hispanics, though. In a separate analysis pooling all three racial/ethnic groups and including two-way race and sex interactions, no race interactions were uncovered for income and father's education, suggesting that these effects are not significantly different between these groups.

Significance levels tell only part of the story, however, insofar as statistically significant relationships can be substantively insignificant. In order to assess the magnitude of the effects of the variables, the regression coefficients are subjected to the logistic transformation, as explained in Chapter 3, and thereby converted to a predicted proportion given selected levels of the independent variables (Agresti and Finlay, 1986). Race/ethnic-specific means are employed for this purpose.

For purposes of calculation, dummy variables in the model are given the most common value, i.e., both parents in the home, suburban residence, does not attend church, while interval measures are calculated at the mean value. Predicted probabilities are consequently artificial. For example, the estimates are calculated with church attendance set at 0 even though some 40 percent of white people do go to church and going to church does have a positive effect on college attendance for white people. This means that the predicted probabilities do not represent the effects of independent variables controlling for the other independent variables in

the model, but instead represent the effects of independent variables given specific values of the dichotomous variables in the model. Consequently, the important thing to notice in the following tables is not the specific point estimates but the magnitude of the effects, that is, the percentage point differences.

Table 4-8 presents predicted college attendance rates for students from families with high and low incomes. The model predicts that an individual with low family income (\$11,500), and with dummy variables in the model set at their most common value, will have a 37.8 percent probability of attending college, while an individual from a high income family (\$45,000) has a 49.8 percent probability of attending college, a 12 percentage point difference.

The percentage point difference between predicted attendance rates for individuals whose fathers did or did not attend college is 13, compared to a 19.2 percentage point difference for mother's education. This suggests that, for whites, mother attending college is a more powerful predictor of child's college attendance than either father's education or a \$33,000 increase in family income. This finding is noteworthy considering the fact that status attainment research has been prone to focus more or less exclusively on the effects of the status attainment levels of the father.

Table 4-8

Predicted college attendance rates by component of family class background, for whites.

Component of Family Background	Predicted Prob. of Attending College
1. Family Income:	
Low income ^a	37.8
High income ^b	49.8
2. Father's Education:	
High school or less	39.0
Attended college	51.8
3. Mother's Education:	
High school or less	40.0
Attended college	59.2

^aINCOME=2, \$11,500

^bINCOME=7, \$45,000

Note: Dummy variables were set at their most common level. Male, both parents in household, mother did not work, went to public high school, 1 or 0 moves, parents did not attend college, does not attend church.

Table 4-9 displays the predicted college attendance rates by mother's education, for blacks. The substantial percentage point differences between college attendance rates for those whose mothers did and did not attend college indicates that mother's education is a powerful predictor of black college attendance for both males and females. Table 4-10 presents the predicted attendance rates, by parent's education, for Hispanics. For Hispanics, father's education has a bigger impact on attendance than mother's education.

For both blacks and Hispanics, but especially for blacks, a strong positive sex effect is evident.

Table 4-9

Predicted college attendance rates by mother's education, for blacks, by sex

Component of Family Background	Predicted Prob. of Attending College	
	Males	Females
Mother's Education:		
High school or less	13.0	47.1
Attended college	25.3	70.1

Note: Dummy variables were set at their most common value for calculations.

Table 4-10

Predicted college attendance rates by component of family class background, for Hispanics, by sex

Component of Family Background	Predicted Prob. of Attending College	
	Males	Females
1. Father's Education:		
High school or less	22.2	30.2
Attended college	38.9	49.1
2. Mother's Education:		
High school or less	22.2	30.2
Attended college	29.9	39.0

Note: Dummy variables were set at their most common value for calculations.

Family Structure and Family Process

Table 4-11 presents the predicted college attendance rates, by family structure and family process indicators. The negative effect of mother working is rather modest with only a 6 percentage point difference for the predicted differences in rates for students whose mothers did or did not work full time while they were in high school. The depressing effect on attendance of single-parent families is more substantial than that of mother working, particularly for females. In a separate analysis of the pooled race/ethnic groups with race/ethnic interaction effects, both blacks and Hispanics are shown to benefit more from having both parents in the household. Both blacks and Hispanics benefit from the mother working, whereas whites benefit from the mother staying home.

While the effects of family structure on attendance is fairly modest, the effect of family process is quite substantial. For students with the highest parental involvement score, the predicted probability of attending college is 68.4. Students with low (INTERPAR=1) parental involvement scores, however, are predicted to attend college at the rate of only 22.2 percent, a difference of 46.2 percentage points. Parental involvement is therefore by far the most powerful predictor of college attendance of any variable in the model, across all race/ethnic groups and for males and females.

Table 4-11

Predicted college attendance rates, by precursors of family social capital, for whites.

Precursor of Family Social Capital		Predicted Probability of Attending College	
<u>Family Structure</u>		Female	
1.	Both parents in household	57.4	50.4
	Single-parent household	76.2	70.8
2.	Mother did not work while student in high school	71.3	
	Mother worked while student in high school	65.1	
<u>Family Process</u>			
5.	High parental involvement ^a	68.4	
	Low parental involvement ^b	22.2	

Note: Dummy variables set at most common value for calculations.

^aINTERPAR=5

^bINTERPAR=1

Table 4-12

Predicted college attendance rates, by level of parental involvement, for blacks, by sex.

Precursor of Family Social Capital		Predicted Probability of Attending College	
		Male	Female
Parental involvement=2		15.0	37.9
Parental involvement=4		45.9	74.8

Note: Dummy variables are set at most common value for calculations.

Parental involvement is the most powerful predictor of college attendance, not only for whites, but for blacks and Hispanics as well. Indeed, parental involvement is the only variable common to each racial/ethnic group that exerts a strong effect on college attendance. Table 4-12 presents the predicted and observed attendance rates, by level of parental involvement, for blacks. Table 4-13 exhibits the predicted and observed attendance rates, by precursors of family social capital, for Hispanics.

Table 4-13

Predicted college attendance rates, by precursors of family social capital, for Hispanics.

Precursor of Family Social Capital	Predicted Probability of Attending College	
	Males	Females
<u>Family Structure</u>		
Mother did not work while student in high school	22.2	30.2
Mother worked while student in high school	29.4	38.7
<u>Family Process</u>		
High parental involvement ^a	34.1	44.0
Low parental involvement ^b	14.4	20.3

^aINTERPAR=5

^bINTERPAR=1

Note: Dummy variables are set at most common value for calculations.

School Structure and School Process

The hypothesis that student reports of problems with the school social climate is negatively associated with college attendance was not supported in any of the racial/ethnic groups, though statistical significance was approached for whites. However, the hypothesis that private high school attendance is positively associated with college attendance is supported within each racial/ethnic group. Table 4-14 displays the predicted attendance rates for public and private high schools, by race.

Table 4-14

Predicted attendance rates for public and private high schools, by race.

<u>School Type</u>	<u>White</u>	<u>Blacks</u>	<u>Hisp</u>
Public	51.6	37.4	29.1
Private	64.2	59.0	55.0

Note: Race-specific means are used in calculations.

Community Structure and Community Process

For whites and blacks, rural or urban residence makes little difference in attendance rates. Only for Hispanics does rural residence have a significant negative impact. Predicted college attendance rates by number of family moves, and church attendance, are presented in Table 4-15. Number of family

moves is included in the model as a community structural variable, inasmuch as structural social capital precursors have been conceptualized as constraining and enabling opportunities for social interaction (process), and family moves constrain and limit children's opportunities to develop long-term relationships in the school and community. As indicated in Table 4-15, however, number of moves is only statistically significant for Hispanics and white females, and the magnitude is only significant in the latter case. Examination of the pooled groups with race/ethnic interactions suggests that moving actually has a positive effect on college attendance for blacks and Hispanics, contrary to expectations.

Table 4-15

Predicted college attendance rates, by number of family moves, for males and females, for whites.

	Males	Females
<u>Number of Moves</u>		
0 or 1 family move	57.0	45.5
2 or 3 family moves	50.8	32.1

While church attendance has a positive effect on college attendance among whites, analysis of the pooled race/ethnic groups indicates that church attendance has a depressing effect on college attendance for both blacks and Hispanics, again contrary to expectations.

In Chapter 5 these findings are discussed and placed in perspective in terms of the research question and hypotheses as developed in Chapter 2.

CHAPTER 5 CONCLUSIONS

Discussion

The research question addressed in this dissertation is, "Do indicators of the precursors of family, school, and community social capital exercise significant effects on college attendance net of the family background factors, i.e., family financial capital and family human capital." The statistical significance of these effects is ascertained by formal tests of specific hypotheses of relationships between the variables in the model and college attendance. These statistical tests indicate that some of these indicators have significant effects on college attendance, and some do not, as some statistical associations vary according to racial/ethnic group and according to sex. For whites, most variables in the model are statistically significant, though for blacks and Hispanics fewer variables are significant, and some cases the coefficient signs are reversed. The only variable in the model to exert consistently strong effects on attendance for all racial/ethnic groups is parental involvement.

The substantive significance is addressed by rephrasing the research question: "Do the structure and the process of social relations in the family, the school, and the community make a real difference in individuals' prospects of attending

college?" The answer that emerges from the data analysis is that the process of social relations in the family clearly makes a real difference in the likelihood of attending college. The importance of family structure is relatively modest compared with the impact of the family process variable --parental involvement--and the magnitude and the direction of the effect of family structure varies considerably by racial/ethnic group. The measure of school social process failed to account for much, if any, of the differences in attendance rates, and the effect of school social structure is modest. Measures of community social structure and process are more powerful predictors of college attendance than school measures, but the magnitude and direction of the effects varies by race and sex.

Consistent with previous research on college attendance, as discussed in Chapter 1, the direct effects of race and sex on college attendance are minimal. The zero-order correlations between college attendance and blacks, Hispanics, and sex are quite small as are the observed differences in college attendance by race/ethnicity and sex. Fifty-eight percent of whites attended college, compared with 56.9 percent for blacks and 50.7 percent of Hispanics. Among whites, the observed attendance for males was only 1 percentage point higher for males (58.8 percent) than females (57.47 percent). Among blacks and Hispanics, however, a higher proportion of females than males were enrolled in college.

The importance of race and sex is not in the magnitude of the direct effects on college attendance, but in the way that the variables in the model operate differently in different levels of race/ethnicity and sex. The social capital model works better for whites than blacks and Hispanics, in that more of the variables in the model are statistically significant and the effects are, for the most part, in the direction hypothesized. Mother working has a negative influence on college attendance for whites, but a positive effect for Hispanics. Church attendance has a positive effect on attendance for whites, but a negative effect for blacks. Among whites, changing schools due to family moves has little effect on attendance for males, but has a negative effect for females. Among blacks, parental involvement is less beneficial for females than males in terms of attendance. These results suggest the need to qualify any claims made for the utility of the social capital model as developed in this study as fitting most closely the life experience of whites.

Family Background: Financial Capital and Human Capital

Disaggregation of the SES measure yields the knowledge that for whites, family income, father's education and mother's education each exert a strong positive effect on attendance. Most interesting is the strength of mother's education as a predictor of college attendance, exerting a more powerful positive effect than father's education and family income, for whites and blacks, but not for Hispanics,

for whom father's education is a more powerful predictor. Mother attending college has a much greater positive impact on attendance than mother working has a negative impact. Family class background, then, continued to play an important role in college attendance rates in the 1980s. Students from high income and high educational status families had a substantial advantage in the likelihood of attending college.

Family Social Capital

The conceptualization of family social structure as developed in Chapter 2 treats the variables number of parents in the household and mother working as precursors of family social capital, enabling and constraining opportunities for supportive parent-child interactions. To some extent, the data support this conceptual treatment. The zero-order correlation between mother working and parental involvement is negative but not large. Both parents in the household is substantially positively correlated with parental involvement, as expected, as two parents in the household have more opportunities for supervision and encouragement than a single-parent household.

The relationship between these family structural factors and college attendance is not at all a straightforward one, however. The depressing effect of mother working on attendance among whites is not large, and among Hispanics, the effect is positive. It may be that the social interaction dimension is salient for whites but that for Hispanics the

increased income from the mother working is the important issue. Among whites, both parents in the household is actually negatively related to college attendance, holding parental involvement constant. This suggests that a relatively high level of parental involvement in a single-parent household may be more valuable than a similar level of involvement in a two-parent household. A parental involvement score of 3 for a single mother may well represent a greater intensity of involvement than a score of 4 for a two-parent household.

The physical presence or absence of parents in the household, then, is not the critical factor. The central finding of this study is that parental involvement is the critical factor. Parental involvement overshadows the impact of even family background variables. The positive correlations between parents education, family income and college attendance indicate that students from high income families in which the parents have attended college are more likely to receive the supervision and educational encouragement that increase the likelihood of college attendance. Parental encouragement also exerts a strong independent effect on attendance, however, suggesting that high levels of parental involvement can have a critical impact on college attendance in situations where family background factors might otherwise work against attendance.

The principal problem with the parental involvement measure is that it is actually measuring two different dimensions of parent-child interaction -- supervision and encouragement of higher education. In retrospect, it would have been preferable to separate the parental involvement variable into a parental supervision variable and an educational encouragement variable, and in future research this should be done.

School and Community Social Capital

The school structural and process measures do not add a great deal to the model. Reports of high school social problems has little or no effect on college attendance. High school type -- private or public -- is statistically significant for all racial/ethnic groups. Students who go to private high schools are more likely to attend college. Attending private school is positively correlated with parental involvement, so this may be because of the intergenerational closure presumed to exist in the communities surrounding private, particularly Catholic, schools. But it could also be that parents who send their children to private high schools are more driven to advance their education and hence are more involved in supervising their children and encourage higher educational attainment.

Place of residence as a community structural variable has little impact on college attendance except that Hispanics living in rural areas are less likely to go to college. The

church attendance measure works as expected for whites, as white students who attend church are more likely to attend college. But blacks and Hispanics who go to church are less likely to go to college. This suggests that black and Hispanic churches do not socialize for achievement in the same way that white churches do, but why this would be so is not clear from the data. For whites, the effect of number of moves on college attendance is significantly different for males and females, with females being more negatively impacted by family moves. Among blacks and Hispanics, however, family moves is not a significant factor in predicting college attendance.

The effect of community social capital measures on college attendance is not the straightforward matter of social structure providing or constraining opportunities for supportive social interaction, as suggested by the social capital model. At least for whites, however, the findings suggest that the connection of the individual with the community does play a role worth investigating.

A part of the reason for the generally unimpressive performance of the school and community social capital variables undoubtedly is the difficulty in finding good indicators of the concepts. The High School and Beyond dataset provides a number of suitable measures of family structure and parent-child interaction, but measures of school and community structure and process are more ambiguous. The

other, and related, problem, is the intangible nature of the concept of "social capital".

It is still an open question as to whether the concept of social capital is more or less useful than the concept of social integration. The dual nature of social capital both as a resource for the individual and as a structural factor constraining and enabling the individual, combined with the highly intangible quality of social capital, renders the concept difficult to handle, both conceptually and methodologically. The present study has employed the strategem of treating social capital as an unmeasured concept and instead measuring indicators of the structure and the process of social relations, which are regarded as precursors of social capital. This strategy avoids the problem of trying to operationalize the highly abstract concept of social capital. But since school community social capital is not being measured directly, it could be argued that what is being measured is the degree of integration of the individual in the community. Considerably more theoretical work needs to be done with the social capital conceptualization in order to make it more useful.

Whether we want to conceptualize the matter as social capital or as a question of social integration, of socializing the individual to accept norms of educational attainment, the centrally important finding of this study is that parents' involvement with their children by monitoring their school

work and other activities and by encouraging their children to go on for higher education, makes a crucial difference in young people's likelihood of attending college.

Significance of the Study

The goals of this study were twofold: first, to advance the scientific knowledge of the educational attainment process, particularly college attendance, and, second, to obtain policy-useful knowledge of the factors that make individuals "at-risk" of not attending college when they are qualified to do so.

This study has contributed modestly to the scientific literature on educational attainment in several respects. First, the disaggregation of SES into its component dimensions appears to present promising possibilities for greater clarity in specifying the relationships between family background factors and attainment measures. Distinguishing between the effects of income and the socializing influences of parent's education allows for greater conceptual rigor and allows for such intriguing findings as the especially strong positive effect of mother's education on attendance.

Conceptually, this study adds to an understanding of the effect of the "significant other" in the educational attainment process, a factor that is sometimes neglected in status attainment research. The statistical analysis indicates that the quality of parental interaction with

children makes a big difference in the probability of attending college. Unfortunately, the argument for a social capital model of the individual progressively embedded in the family, school and the community, is supported inconclusively by analysis of the data. The measures of family social capital precursors appear to be largely valid--that is, they measure what they were intended to measure: family structure and family process. It is much less clear that school type is measuring school social structure or that reports of school social problems is an adequate measure of school social process. Similarly, size of place, number of moves, and church attendance, may or may not be measuring something that can be described as a precursor of community social capital, even though both of these factors, in some cases, may have an effect on college attendance.

Even though the school and community measures proved inconclusive, the moderate effects of number of moves and church attendance suggest that further research efforts using improved measures of school and community social structure and process may be worthwhile. Existing surveys have not been designed to measure these highly abstract concepts, so more successful efforts will probably require primary data collection.

With respect to identifying the risk factors in the likelihood of not attending college, certain factors stand out as especially important. Coming from a low income family or

from a family in which the parents have not attended college contributes substantially to the risk of not attending. For whites, mother working full-time is a modest risk-factor and for blacks, a single-family home is a risk-factor. For all race/ethnic groups, attending public school is a minor risk-factor. For white females, two or more family moves is a risk factor, while for blacks and Hispanics, attending church works against college attendance. But, by far, the most significant risk-factor is low levels of parental involvement.

The significance of this finding may be clarified by reference to the conceptual treatment of family social process as mediating the effects of both family background variables and family structural variables. Family income, parents' education, and family structural variables clearly do have an impact on the educational attainment process, yet these factors are mediated by the independent effect of the quality of parental involvement. This means that low levels of parental involvement can combine with low levels of family background indicators or disadvantageous family structure to severely depress the prospects of attending college. Those with high levels of family income, parents education, and advantageous family structure may nevertheless be put at-risk by low levels of parental involvement.

One of the most topical findings of the study pertains to the relative impact of family structure and family process. This study does not provide support for the view of the

superiority of the 1950s-style family arrangements in which the mother stayed home and took care of the children while the father went to college and got a job to support the family. The analysis of the High School and Beyond data does not indicate, at least with respect to college attendance rates, that single-parent families and working mothers present much of a problem. Whether these factors represent a problem for college attendance appears to depend a lot on the context of the situation: the racial/ethnic milieu, the sex of the individual, and on the income and the educational background of the parent or parents. Indeed, the positive effect on attendance of the mother attending college is greater than any negative effect of the mother working or being a single-mother. The message of this study is that family is important; not so much the specific form of the family, but the strength of family relationships and family interaction.

A single mother or father can go a long way toward ameliorating any negative effect of the family structure on their children by being more involved with their children. The public policy implication of this finding is that no new government program is called for to encourage children to go to college. The greatest prospect for improvement in attendance rates appears to be in the realm of improved parenting. High powered statistical techniques have been employed to rediscover an old-fashioned truth about families,

that parents who get involved with their children can make a difference in their lives.

Instead of a linear relationship between the independent and dependent variables, logistic regression assumes an S-curve, wherein incremental change in the middle range of an independent variable produces a greater effect on the dependent variable than the same amount of change at the extremes. This means that the need is not for heroic improvements in parenting. A modest improvement in the middle range can make a big difference in the outcome.

This is not to suggest that government has no role to play in improving college attendance. Direct assistance in the form of grants and low-interest loans continues to be an important task of government inasmuch as low family income remains a barrier to college attendance for many who would otherwise be qualified to attend.

Other types of governmental and business supports for families might also be very appropriate. However, because of the ambiguity and uncertainty associated with the measures of school and community social capital precursors, the study does not provide much insight into the salient characteristics of the relationship of the individual to the school and community in the same manner as is the case with the family. One might speculate about the possible importance of school and community efforts to make youth feel connected and integrated, or to provide supports for the family. For example, on-site

day care at businesses and government offices would provide more opportunities for parents to interact with their children. However, the findings with respect to school and community measures are not strong enough to warrant public policy recommendations in these areas.

To reiterate, then, the central finding of this study is that parental involvement in terms of supervision and encouragement plays an important role in the educational attainment process by mediating the effects of family background and family structure.

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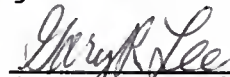
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BIOGRAPHICAL SKETCH

Mark Holland Smith was born in DeLand, Florida, on March 19, 1954. He earned a Bachelor of Arts in political science from the University of North Carolina in 1985, and a Master of Arts in political science from the University of Florida in 1988. He has accepted a post-doctoral research fellowship at the Bowman Gray Medical School, Wake Forest University.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



Gary Lee, Chair
Professor of Sociology

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Lionel J. Beaulieu, Cochair
Professor of Sociology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



John Henretta
Associate Professor of Sociology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



Leonard Beeghley
Professor of Sociology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, for a dissertation for the degree of Doctor of Philosophy.

Glenn D. Israel

Glenn Israel

Associate Professor of Agricultural
Education and Communication

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, for a dissertation for the degree of Doctor of Philosophy.

Albert R. Matheny

Albert Matheny

Associate Professor of
Political Science

This dissertation was submitted to the Graduate Faculty of the Department of Sociology in the College of Liberal Arts and Sciences and to the Graduate School and was accepted as partial fulfillment of the requirements of the degree of Doctor of Philosophy.

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Dean, Graduate School

UNIVERSITY OF FLORIDA



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